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S. Hrg. 103–299, Pt. 2

Senate Hearings

Before the Committee on Appropriations

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Energy and Water Development Approp...

Energy and Water Development Appropriations

Fiscal Year 1994

103d CONGRESS, FIRST SESSION

H.R. 2445

PART 2 (Pages 1–736)
NONDEPARTMENTAL WITNESSES

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S. Hrg. 103–299, Pt. 2

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1994

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

H.R. 2445

AN ACT MAKING APPROPRIATIONS FOR ENERGY AND WATER DEVELOPMENT FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1994, AND FOR OTHER PURPOSES

PART 2 (Pages 1–736)

Nondepartmental Witnesses

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1994

WEDNESDAY, MARCH 24, 1993

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:01 p.m., in room SD–192, Dirksen Senate Office Building, Hon. J. Bennett Johnston (chairman) presiding.

Present: Senator Johnston.

Also present: Senator Feinstein.

NONDEPARTMENTAL WITNESSES

OPENING STATEMENT

Senator JOHNSTON. The subcommittee will come to order. I want to welcome each one of you to the hearing today. We have a large number of witnesses who wish to be heard.

Therefore, in accordance with our notification to each of the witnesses, it will take some self-restraint on the part of everyone to hold oral testimony to a minimum in order that all of you who have requested an opportunity to testify may be heard.

I ask that the detailed prepared statements that each of you has worked out very carefully be submitted for the record where they will be carefully reviewed. Then if each witness will summarize or highlight the important points in his or her testimony, it will be most helpful.

So, again, welcome. And we will now proceed with our first witness.

Senator Feinstein, we want to welcome you to the committee and call on you for any remarks or testimony you would like to make.

STATEMENT OF HON. DIANNE FEINSTEIN, U.S. SENATOR FROM CALIFORNIA

Senator FEINSTEIN. Thank you very much, Mr. Chairman. And I want to thank you for allowing me to sit with your subcommittee today. I appreciate the opportunity to listen to the testimony of many Californians.

To all of you who have come here from California I want to extend the warmest possible welcome. I appreciate your taking your time from the busy schedules you have to make this long trip across the country. And I am rapidly learning how long it is. [Laughter.]

I am looking forward to hearing about your projects.

Mr. Chairman, today this subcommittee will receive testimony from representatives of the California Water Commission and the California Marine Affairs Navigation Conference.

The subcommittee will also hear from representatives of ports, flood control districts, water districts, local governments, and more.

I cannot stress too strongly the importance of the work of these agencies and the job they are doing. They represent a broad array of projects with a substantial economic impact within our State: port development and maintenance of dredging, flood protection, water supply projects, and other infrastructure modifications, are crucial to California's economic recovery.

CALIFORNIA APPROPRIATIONS VERSUS TAX REVENUES

Mr. Chairman, I want you to hear this. As a member of the full Appropriations Committee, I am very concerned, because as I look at appropriations measures coming out of this Senate, I do not believe that California is fairly represented.

Of course, we have not had a member on the Appropriations Committee now for some 24 years. But California remains a substantial donor State to the Federal Government. We actually provide about $13 billion more in tax revenues a year than we receive back in any kind of fair return.

CENTRAL VALLEY PROJECT IMPROVEMENT ACT PROJECTS

A significant step to remedying that inequity will be the timely implementation of the Central Valley Project Improvement Act.

The California appropriations task force, comprised of the California members in both the House and the Senate Appropriations Committees, has endorsed full funding of this law.

Full funding is the key to protecting, restoring, and enhancing fish and wildlife in the Sacramento and San Joaquin Valleys. But importantly, in addition, it is vital to stabilizing water supplies for agricultural municipal and industrial purposes.

For example, the moneys would provide for a number of important activities: One, the construction of the Shasta Dam temperature control device, which will allow the necessary flexibility and release of water both for the ongoing generation of hydroelectric power and the protection of spawning salmon in the upper Sacramento River, something which is not able to happen today; two, upgrades to the Coleman National Fish Hatchery aimed at restoring and maintaining salmon and steelhead in the Sacramento River basin; and three, river stabilization and screening at the Glenn-Colusa Irrigation District, which would ensure that the irrigation district can supply its farmers with water, which it cannot at the present time.

There are many other projects, Mr. Chairman, which are meritorious projects in California. And I am going to make one other point. Through no work of this Senate or this Congress, California has been what is called the Proposition 13 State from 1977.

All during most of the eighties, California could not even put forward a general obligation bond. That has now changed, but what we find is that in many places the infrastructure of California is decrepit, outmoded, and does not respond to the fact that one out of eight Americans now reside in this State.

Mr. Chairman, I want to say thank you for allowing me to sit this afternoon. And most particularly, I want to thank you for the energy and counsel and, I think, intelligent leadership that you have provided to this committee.

And by listening to California, you can only make yourself more intelligent, more energetic, and providing better leadership. [Laughter.]

Thank you, Mr. Chairman.

Senator JOHNSTON. Thank you very much, Senator Feinstein. [Applause.]

I have spent a lot of time in California lately. As you know, I am chairman of the Energy and Natural Resources Committee, which reported the Central Valley Improvement Act, title XXXIV of H.R. 429.

And I am most proud of the provision in that bill, which provided for all of the additional rain this year, for which we take full credit. [Laughter.]

I am sure with you on the Committee on Appropriations that California will get more than its share. [Laughter.]

CALIFORNIA NAVIGATION AND PORT IMPROVEMENT PROJECTS

STATEMENT OF ROBERT H. LANGNER, PRESIDENT, CALIFORNIA MARINE AFFAIRS AND NAVIGATION CONFERENCE

Senator JOHNSTON. We will begin today with the California Marine Affairs and Navigation Conference, and we are happy to welcome back before the committee Mr. Robert H. Langner, who is president and ringmaster of this group.

So, Bob, please take over.

Mr. LANGNER. Thank you very much, Mr. Chairman.

If the chairman would like to have a little more of California, we would hope you would be together with Senator Feinstein at our Golden State luncheon tomorrow. You both have been invited and we hope you can attend.

Senator JOHNSTON. Well, thank you very much.

Mr. LANGNER. We are delighted that you are here, Senator Feinstein. It is a pleasure to have a member from California on the Appropriations Committee. You are right; it has been a long time.

It is my pleasure—and in this instance, my ultimate one in my current role—to appear for the 35th year before this committee, representing the State of California in terms of its navigation and coastal engineering needs.

We have appended to our testimony a schedule of projects—although it is very unusual that we are presenting these recommendations for funding for fiscal 1994 prior to the administration budget being submitted to Congress—and testimony by the Corps of Engineers. It is an unusual year, shall we say?

Recalling a lesson learned from the past, we will try to make our testimony brief and as concise as possible, Mr. Chairman.

[The statement follows:]

STATEMENT OF ROBERT H. LANGNER

Mr. Chairman and members, it is my pleasure—and in this instance, my ultimate one in my current role—to appear again before this Committee to submit C–MANCs recommendations for funding of California navigation and related projects in the coming fiscal year; to present our members who will submit statements and speak briefly on behalf of their projects, and to introduce others who are here in support of our annual recommendations.

Recalling the lessons learned from chairmen in my first and subsequent appearances for 34 years, particularly from the legendary Representative Mike Kirwin, brevity in content and alacrity in delivery are the qualities most appreciated by the Committee in witnesses and presentations.

Accordingly, my remarks will be even more brief than in past years; other C–MANC presentations it is hoped will be similarly concise.

This year is also unusual in our presentation preceding the submission of the President's budget and testimony from the Corps of Engineers. While posing some problems, our recommendations have been developed through our long experience with our projects and the appropriations process. Most will be consistent with the Administration budget, and the few anticipated exceptions will be addressed by our witnesses today.

The well-publicized adverse impacts on California's economy of reduced defense expenditures and anticipated down-scaling or closing of military installations and facilities are real and painful. Even in the Great Depression, and subsequently until now, the Golden State's resources and growth have combined to shield it in part from the down cycles.

But despite these conditions and problems, there are many positive factors which once again—given reasonable opportunity and continued Federal investment—will assure its significant role in the national economy will continue to grow.

The State has seemingly unlimited prospects to lead in the expansion of trade, commerce and investment with the near-exploding economies of Asia. We are indeed the "Gateway to the Pacific". California's role as the nation's number one exporter is reflected in last years growth of nearly 12 percent over 1991—almost twice the increase in exports for the nation as a whole. Our merchandise shipments of $56.3 billion underscored the continuing advantage of the United States, reflected in California's high technology industries, as extremely competitive.

It is estimated that 1992's slowdown which cost California about 250,000 jobs—including 100,000 in manufacturing—would have been nearly twice as severe had not our export gains assured approximately 200,000 new jobs.

As a Pacific Rim nation and immediate neighbor, Mexico is now our number three market; we believe that NAFTA in the net will benefit increasingly the United States and our two major partners. Indeed, continued liberalization of world trade and related exchanges is more critical today than ever. To those who remember the worldwide economic wreckage its absence compounded in the 1930's, there are no alternatives.

The largest U.S. port complex continues to be Los Angeles-Long Beach, now fourth busiest containerized cargo gateway in the world. In the north, the Golden Gate continues as a major shipping center. Our coastline—not always easily utilized for navigation—sustains other significant commercial cargo facilities as well as substantial shallow draft recreational uses and the fisheries.

Expanding commerce through these facilities and their growing utilization reflect the wise investment of the government. While there is increasing participation and needed investment in construction and operating costs which are being met by our project sponsors, we look to you to continue to appreciate and be supportive of the traditional Federal role.

To assure the brevity referenced at the beginning of this statement, several comments will be almost cryptic: C–MANC was astonished with the manner, scheduling and procedures involved in the development and November release of the proposed reorganization of the Corps of Engineers. We joined in calling for a halt in its immediate adoption and impact, to allow for adequate study, evaluation and input—which had been assured but were lacking. The favorable response from the Department of Defense to these requests through our Congressional Delegation was welcomed and appreciated.

California continues in its often difficult but seemingly fated leadership in many areas of environmental concerns and responses. The LTMS (Long Term Management Strategy) study for dredging being jointly funded in the San Francisco Bay Region is one example of such concerns and positive action. C–MANC's role initiated in the early 1970's—as the nations first ongoing industry dredging response—is reflected in this and other constructive results.

Similarly, our ports and project sponsors have met and will continue to meet all cost-sharing and other fees and tolls deemed necessary to maintain and improve navigation facilities.

In closing, in addition to those who appear at the witness table with me, there are others to introduce. It gives me personal pleasure to present first Elizabeth Krauth who will become President of C–MANC July 1st. She brings with her considerable experience and qualifications, which will certainly be reflected in changes and improvements in C–MANC and its programs and operations. I am sure also that she will learn as I have over three-plus decades to appreciate the very cordial reception, civility and thoughtfulness which you and your predecessors have accorded us—an annual experience which I have always enjoyed—and will miss.

Thank you.

(Amounts in Thousands)
FY 1994

PROJECT	TOTAL COST C OF E	BALANCE AFTER FY 1992	FY 1993 CONFERENCE REPORT	FY 1993 WORK ALLOWANCE	FY 94 C-MANC Recommendations PROGRAMMED AMOUNT	FY 94 C-MANC Recommendations TOTAL RECOMMENDATIONS (WHEN GREATER THAN PROGRAMMED)	PURPOSE OF FUNDING
POTENTIAL NEW SHORELINE PROTECTION STUDIES							
Coronado and Imperial Beach (Silver Strand Shoreline)	450	450	0	0	0	450	Complete Recon Report
Portuguese Bend Shoreline Demonstration	675	675	0	0	0	300	Initiate Feasibility Study
Malibu Coastal Area	875	875	0	0	0	250	Complete Recon Report; Initiate Feasibility Study
SHORELINE PROTECTION STUDIES IN PROGRESS							
Oceanside Shoreline	1,000	1,000	100	78	300	N/C	Complete Recon Report
Mission Bay, San Diego County	875	565	200	90	100	N/C	Continue Feasibility Study
Pacific Coast Shoreline, Carlsbad	1,310	1,310	350	275	260	N/C	Complete Recon Report; Initiate Feasibility Study
Rancho Palos Verdes	1,175	745	400	400	0	200	Continue Feasibility Study
San Francisco County, Ocean Beach	1,100	572	665	205	200	N/C	Continue Feasibility Study
POTENTIAL NEW SPECIAL STUDIES							
Coast of California, Storm & Tidal Waves, Central Coast Region	2,700	2,700	0	0	0	0	Non-Federal cost share not yet available
Southern California Oil Spill Emergency	500	500	0	0	0	0	No current sponsor
SPECIAL STUDIES IN PROGRESS							
Coast of California, Storm & Tidal Waves, South Coast Region (Orange County)	1,275	749	250	196	250	N/C	Continue Study
POTENTIAL NEW NAVIGATION STUDIES							
Crescent City Harbor	200	200	0	0	0	200	Initiate and Complete Recon Report
Marina del Rey, Ballona Creek	500	500	0	0	0	500	Initiate and Complete Recon Report
Moss Landing Harbor Elkhorn Slough	400	400	0	0	0	400	Initiate and Complete Recon Report
Pillar Point Harbor	400	400	0	0	0	400	Initiate and Complete Recon Report
San Leandro Bay	375 1/	375	0	0	0	325	Complete Recon Report
San Francisco Bay Bar Channel	500	500	0	0	0	500	Initiate and Complete Recon Report
Stockton Deep Water Ship Channel (Deepening)	650	650	0	0	0	0	No current requirement

1/ Includes $50 prior to 9/30/78

(Amounts in Thousands)
FY 1994

PROJECT		TOTAL COST C OF E	BALANCE AFTER FY 1992	FY 1993		FY 94 C-MANC Recommendations		PURPOSE OF FUNDING
				CONFERENCE REPORT	WORK ALLOWANCE	PROGRAMMED AMOUNT	TOTAL RECOMMENDATIONS (WHEN GREATER THAN PROGRAMMED)	
				NAVIGATION STUDIES IN PROGRESS				
Humboldt Harbor & Bay (Deepening)		1,470	362	255	60	162	N/C	Continue Feasibility Study
Newport Bay Harbor		1,150	796	150	96	150	N/C	Continue Feasibility Study
Port Hueneme		1,250	1,250	200	157	350	N/C	Complete Recon Report; Initiate Feasibility Study
San Francisco Harbor		1,030	655	290	238	215	N/C	Continue Feasibility Study
Santa Cruz Harbor to Capitola		750	750	300	300	0	300	Initiate Feasibility Study
Santa Monica Breakwater		690	173	100	78	95	N/C	Complete Feasibility Study
				CONTINUE PRECONSTRUCTION ENGINEERING AND DESIGN				
Los Angeles - Long Beach Harbors		118,100 (7,400)	(7,400)	(900)	(2,050)2/	(2,000)	N/C	Continue Design
Morro Bay Harbor		2,100 (770)	(470)	(420)	(348)	(122)	N/C	Complete Design
Noyo River and Harbor (Breakwater)		18,350 (3,830)	(2,003)	(970)	(970)	(550)	(1,000)	Continue Design
San Rafael Canal		17,920 (1,860)	(1,860)	(300)	(650)2/	(1,210)	N/C	Complete Design
Santa Barbara Harbor		5,400 (1,000)	(1,000)	(380)	(300)	(360)	(400)	Continue Design
Santa Monica Breakwater		7,700 (2,370)	(2,370)	(0)	(0)	(100)	N/C	Initiate Design

2/ Includes funds previously appropriated

PROJECT		TOTAL COST C OF E	BALANCE AFTER FY 1992	CONFERENCE REPORT	WORK ALLOWANCE	PROGRAMMED AMOUNT	TOTAL RECOMMENDATIONS (WHEN GREATER THAN PROGRAMMED)	PURPOSE OF FUNDING
				CONTINUING CONSTRUCTION PROJECTS				
Oakland Harbor	(N)	60,050	42,751	3,200	2,213	1,200	2,500	Continue Construction
Oceanside Harbor	(N)	3,838	2,698	2,660	2,698	0	N/C	Complete in FY 1993
Richmond Harbor	(N)	15,000	9,867	1,330	1,036	550	N/C	Continue studies leading to construction
Sacramento River Deep Water Ship Channel	(N)	22,700	15,069	100	0	0	N/C	Local sponsor requested delay
San Francisco Bay to Stockton (John F. Baldwin & Stockton Ship Channels)	(N)	145,200	83,663	1,250	655	750	1,000	Continue Construction
Surfside-Sunset & Newport Beach	(BE)	32,500	17,332	0	0	0	N/C	No current requirement for periodic nourishment
Ventura Harbor	(N)	6,120	5,290	500	452	4,838	N/C	Complete Construction

FY 96 C-MANC Recommendations (Amounts in Thousands)
FY 1994

PROJECT	FY 1992 OBLIGATIONS	FY 1993 ESTIMATED OBLIGATIONS	PROGRAMMED AMOUNT	TOTAL RECOMMENDATIONS (WHEN GREATER THAN PROGRAMMED)	PURPOSE OF FUNDING
OPERATIONS AND MAINTENANCE					
Bodega Bay Harbor	156	0	0	N/C	No maintenance required
Channel Islands Harbor	741	2,243	0	400	Engineering and design for future dredging and seal north jetty
Crescent City Harbor	1,000	697	0	N/C	No maintenance required
Dana Point Harbor	0	0	0	N/C	No maintenance required
Fisherman's Wharf Area	323	58	0	N/C	No maintenance required
Humboldt Harbor and Bay	2,110	3,520	3,322	N/C	Dredging
Los Angeles - Long Beach Harbors	0	1,935	95	3,500	Sediment survey; structural survey of middle breakwater; engineering and design for future dredging; dredging Los Angeles River (2,000) and Los Angeles Harbor (1,000)
Los Angeles - Long Beach Harbors Model	490	151	155	525	Continue model maintenance and replace wave gages
Marina del Rey	144	1,783	2,105	N/C	Dredging
Monterey Harbor	0	1,450	0	1,800	Complete breakwater repair
Morro Bay Harbor	694	118	2,250	N/C	Dredging
Moss Landing Harbor	0	776	0	1,000	Repair jetty
Napa River	0	0	2,397	N/C	Dredging
Newport Bay Harbor	197	0	0	1,000	Sediment survey; engineering and design; and initiate jetty repairs
Noyo River and Harbor	34	536	0	N/C	No maintenance required
Oakland Harbor	1,415	2,705	2,593	3,000	Dredging; bridge repairs; and seismic modification design for railroad brid
Oceanside Harbor	736	1,051	845	N/C	Dredging
Oceanside Experimental Sand Bypass	1,367	704	0	3,000	Operation of Bypass Plant and construction of Phase III
Petaluma River	997	49	1,850	N/C	Dredging
Pillar Point Harbor	0	0	0	N/C	No maintenance required
Port Hueneme	0	0	0	N/C	No maintenance required
Port San Luis	1,847	0	0	N/C	No maintenance required
Redondo Beach Harbor (King Harbor)	0	42	0	N/C	No maintenance required
Redwood City Harbor	798	3,382	0	N/C	No maintenance required
Richmond Harbor	2,441	2,209	2,342	2,700	Dredging and training wall repair
Sacramento River					
Sacramento River (30 ft.)	400	1,989	404	N/C	Bank stabilization
Sacramento River (Shallow Draft)	159	85	151	275	Maintain lock, bridge and structural maintenance
San Diego Harbor	132	0	150	350	Sediment survey and inspection of Zuniga jetty
San Diego River & Mission Bay	16	0	0	700	Revetment repair at Hospitality and Mission Points
San Francisco Bay-Delta Model Structure	2,761	1,582	1,275	2,400	Annual maintenance and operation of visitor center
San Francisco Bay Long Term Management Strategy	2,401	2,253	896	N/C	Complete Federal funded studies
San Francisco Harbor	1,041	1,851	1,952	N/C	Dredging
San Joaquin River	1,099	1,316	1,427	N/C	Dredging and Bank Stabilization
San Leandro Marina (Jack D. Maltester Channel)	0	1,233	0	N/C	No maintenance required
San Pablo Bay and Mare Island Strait	1,046	2,364	1,100	1,600	Dredging
San Rafael Creek	105	2,200	0	N/C	No maintenance required
Santa Barbara Harbor	838	1,114	1,625	N/C	Dredging, including advance maintenance dredging at West Beach
Santa Cruz Harbor	0	0	0	200	Repair jetty caps
Suisun Bay Channel	666	1,064	2,020	N/C	Dredging
Suisun Channel	0	0	0	N/C	No maintenance required
Ventura Harbor	2,734	1,251	1,200	N/C	Dredging
Drift Removal (S.F. Harbor and Bay)	1,927	1,872	2,208	N/C	Drift removal and maintenance of debris boats

MORRO BAY, CA, HARBOR ENTRANCE

STATEMENT OF WILLIAM YATES, MAYOR, MORRO BAY, CA

Mr. LANGNER. We have our first witness. It is William Yates, mayor of Morro Bay.

Mayor.

Mr. YATES. Thank you, Mr. Chairman, Senator Feinstein.

Morro Bay's harbor entrance is one of the most dangerous on the west coast. Over the years, many accidents have occurred, many lives lost.

As recently as last month, a whale-watching excursion boat was struck by a rogue wave, catapulting five people into the water. There were injuries, but fortunately no one was killed.

The $2.1 million Morro Bay is seeking for our harbor entrance improvement project will greatly improve the safety of our harbor entrance.

Our district has enjoyed congressional bipartisan representation for many years, from Leon Pineta and now Michael Huffington. Your support of our project is appreciated.

Thank you.

Mr. LANGNER. Now, we have to jump north to San Mateo County Harbor District, represented by General Manager Don Guluzzy.

PILLAR POINT HARBOR, CA, RECONNAISSANCE STUDY

STATEMENT OF DONALD F. GULUZZY, GENERAL MANAGER, SAN MATEO COUNTY HARBOR DISTRICT

Mr. GULUZZY. Thank you. Thank you, Mr. Chairman, Senator Feinstein.

The San Mateo County Harbor District is here today to request congressional support for a $400,000 appropriation to prepare a reconnaissance study to determine the Federal interest in dredging Pillar Point Harbor.

Pillar Point Harbor is located near Half Moon Bay. It is a very active commercial fishing port, as well as a recreational boating facility.

In 1991, Pillar Point Harbor landed over 8.3 million pounds of fish, which is valued in excess of $4.8 million. And to our testimony, we have appended a bar graph that shows the growth of fishing from 1982 through 1991.

The District and the Corps of Engineers built a Federal breakwater in the late sixties and created the only safe harbor of refuge between San Francisco and Santa Cruz. That covers about 30-plus miles of coastline.

The harbor district is very unique in many respects in that it has its own search and rescue unit, which averages between 100 and 115 rescues every year. Our search and rescue service has saved hundreds of lives and over $15 million in personal property over the last 20 years.

We have eliminated the need for a Coast Guard facility in our port because of this and have created great savings to the Federal Government because of that.

Our partnership with the Coast Guard has been mutually beneficial. In fact, the Coast Guard has issued six commendations to our harbor district crew for saving the lives that they have over these last 20 years.

Never in its history has Pillar Point Harbor required any dredging or other major water resources work. And that has been for over one-third of a century. I may never require dredging of the channel entrance.

Our harbor district is of the opinion that a Federal interest in our harbor can and should be established and that a reconnaissance study would determine if Federal participation is warranted.

Mr. Chairman, we thank you. And we will submit our data for the record. Thank you.

[The statement follows:]

STATEMENT OF DONALD F. GULUZZY

Good morning, Mr. Chairman, the San Mateo County Harbor District is a countywide special district In Northern California, near San Francisco.

The San Mateo County Harbor District is responsible for operating, developing and maintaining two small craft marinas and harbors: Oyster Point Marina/Park in South San Francisco and Pillar Point Harbor near Half Moon Bay, CA.

The San Mateo County Harbor District is here today to request congressional support for a $400,000 appropriation to prepare a reconnaissance study to determine the feasibility of Federal interest to dredge Pillar Point Harbor near Half Moon Bay, which is both a recreational boating facility and a very active commercial fishing port. In 1991, Pillar Point Harbor landed over 8.3 million pounds of fish valued in excess of $4.8 million. The attached bar graph shows the growth of fish landed and its value from 1982 through 1991.

The District and ACOE forged a partnership in the late 1960's to build a 2,620 foot west outer breakwater and a 3,670 foot east outer breakwater to create a Safe Harbor of Refuge for all the boaters who had no safe port between San Francisco and Santa Cruz, an area comprising 30+ miles of coastline.

The Harbor District has its own Search and Rescue unit which averages between 100–115 rescues every year. Our Search and Rescue service has saved hundreds of lives and over $15 million in personal property over the last 20 years; we have also eliminated the need for a Coast Guard facility at our Harbor which results in significant savings to the Federal government. Our partnership with the Coast Guard has been mutually beneficial; in fact, the Coast Guard has issued six commendations to District staff since 1982 for our Search and Rescue efforts. A copy of these commendations are enclosed with this statement for your review.

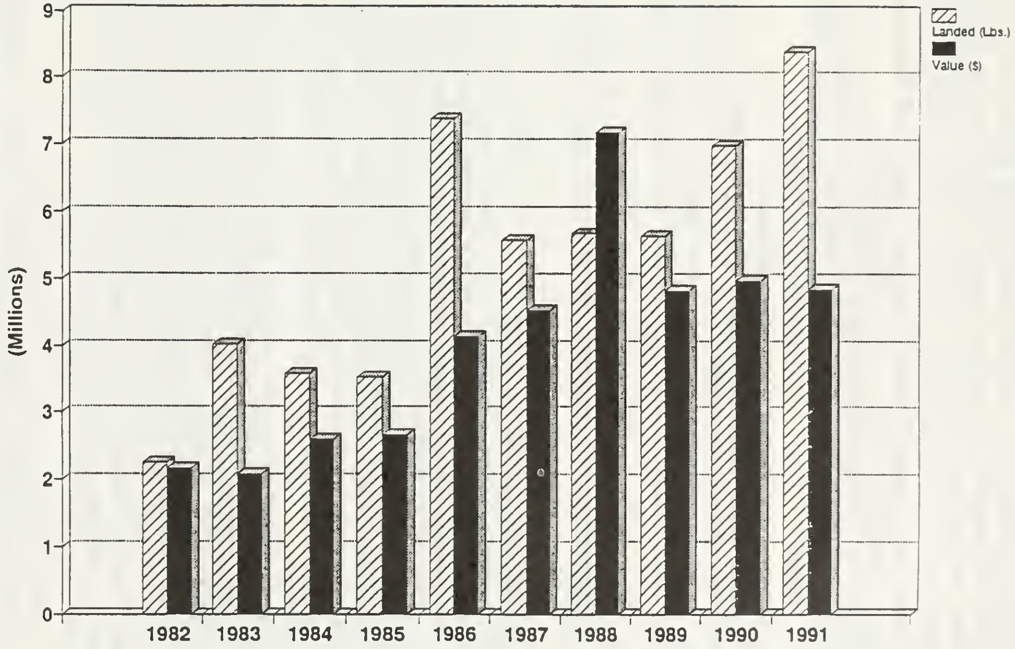
Pillar Point Harbor has never required any dredging or other major work for one third of a century. It may now require dredging of the channel entrance or other related navigation and water resources work.

The San Mateo County Harbor District is of the opinion that a Federal interest in our harbor can and should be established. A reconnaissance study would determine if Federal participation is warranted.

Thank you, Mr. Chairman, for allowing me to testify in support of our request for a $400,000 appropriation in the Corps' budget.

SMCHD, PILLAR POINT HARBOR
Annual Fish Landed & Value

Source: Department of Fish and Games



SAN MATEO COUNTY HARBOR DISTRICT BOARD OF HARBOR COMMISSIONERS

MINUTES—DECEMBER 2, 1992

The regular meeting of the San Mateo County Harbor District Commission was held at the Coastside Community Center, 535 Kelly Avenue, Half Moon Bay, California. The meeting was called to order at 8:00 p.m. by President Charles Boerio.

A. Roll call

Commission Present: President Charles J. Boerio and Commissioners Raymond Farnow, Jean Flocks, Frank Lee and Victor Subbotin

Staff/Other Present: General Manager Donald F. Guluzzy, Legal Counsel Kenneth Dickerson, Oyster Point Marina/Park Harbormaster Robert Johnson, Pillar Point Harbormaster Robert McMahon, Engineer Kenneth Johnson representing Creegan and D'Angelo

A.1 Presentation by United States Coast Guard

President Boerio introduced Captain Win Risinger from the United States Coast Guard who made a presentation to the Pillar Point Harbor staff. Captain Risinger read the following document into the record stating that in honor of the Pillar Point Harbor Patrol, it was requested that Admiral Gilbert give a commendation to the patrol.

DEPARTMENT OF TRANSPORTATION, UNITED STATES COAST GUARD, PUBLIC SERVICE COMMENDATION TO PILLAR POINT HARBOR PATROL, SAN MATEO COUNTY HARBOR DISTRICT, CA

In recognition of notable services which have assisted greatly in furthering the aims and functions of the Coast Guard.

For continued exemplary service to the boating community in the advancement of the Coast Guard's mission: Search and Rescue, Recreational and Commercial Vessel Safety and Marine Environmental Protection. From January 1, 1990 to July 15, 1992, Pillar Point Harbor Patrol completed 200 search and rescue cases and 40 boating safety cases. As a result of their quick and well trained response over 20 persons were saved from life threatening situations and $250,000 worth of property recovered. Pillar Point Harbor Patrol Boat RADON is the only search and rescue resource available 24 hours a day, 365 days a year between the Golden Gate and Santa Cruz and they have gained a well deserved reputation of quick response and reliability.

Captain Risinger read the names of the following staff members who in turn stepped forward to receive a commendation pin: Harbormaster Robert McMahon and Patrol Members Robert Hansen, Don Coats, Dan Temko, Rick Krebs, Allen Catterson, John Draper, Scott Cook, David Lewis, Natalie Lewis (absent). Harbormaster McMahon thanked the members of his staff for the fine job they have done and also thanked the Commission for their continued support and training.

President Boerio expressed appreciation to the Coast Guard for their award and stated that the Commission would appreciate, in consideration of the recent budget cuts, any assistance they could give the District in the future to obtain funds for the continuing services of the patrol.

B. Consent calendar

1. Approve minutes of November 18, 1992 meeting. Recommendation: Approve minutes of November 18, 1992 meeting.

2. Approval of bills and claims. Recommendation: Approve the bills and claims in the amount of $146,231.65.

3. Adopt Resolution No. 21–92/Acceptance of 1991–92 annual audit/financial statements. Recommendation: That the Harbor Commission adopt Resolution No. 21–92 formally accepting the 1991–92 Annual Audit completed by the San Mateo County Harbor District and C. G. Uhlenberg & Company for the fiscal year that ended June 30, 1992.

4. Approval of change order No. 1 for the East Beach Pathway project at Pillar Point Harbor. Recommendation: Authorize the General Manager to execute Change Order No. 1 for the East Beach Pathway Project at Pillar Point Harbor in an amount not to exceed $2,573.50.

5. Approval of professional services agreement for civil and geotechnical engineering services for surface water drainage at Oyster Point Marina/Park. Recommendation: Authorize the General Manager to execute a Professional Services agreement between the Harbor District and Levine-Fricke, Consulting Engineers/

Hydrogeologists, for surface water drainage improvements to be constructed at Oyster Point Marina/Park in South San Francisco at a cost not to exceed $17,000.

6. Approval of professional services agreement with Creegan & D'Angelo for data collection and Army Corps of Engineers permit preparation for Oyster Point Marina/Park dredging.

Public Service Commendation

to

Robert A. McMahon
Pillar Point Harbor Master

Pillar Point Harbor is located 27 miles south of the Golden Gate on the rugged California coast. The nearest Coast Guard search and rescue facility is a minimum of two hours away, and more often four to six hours away, depending on weather and sea conditions.

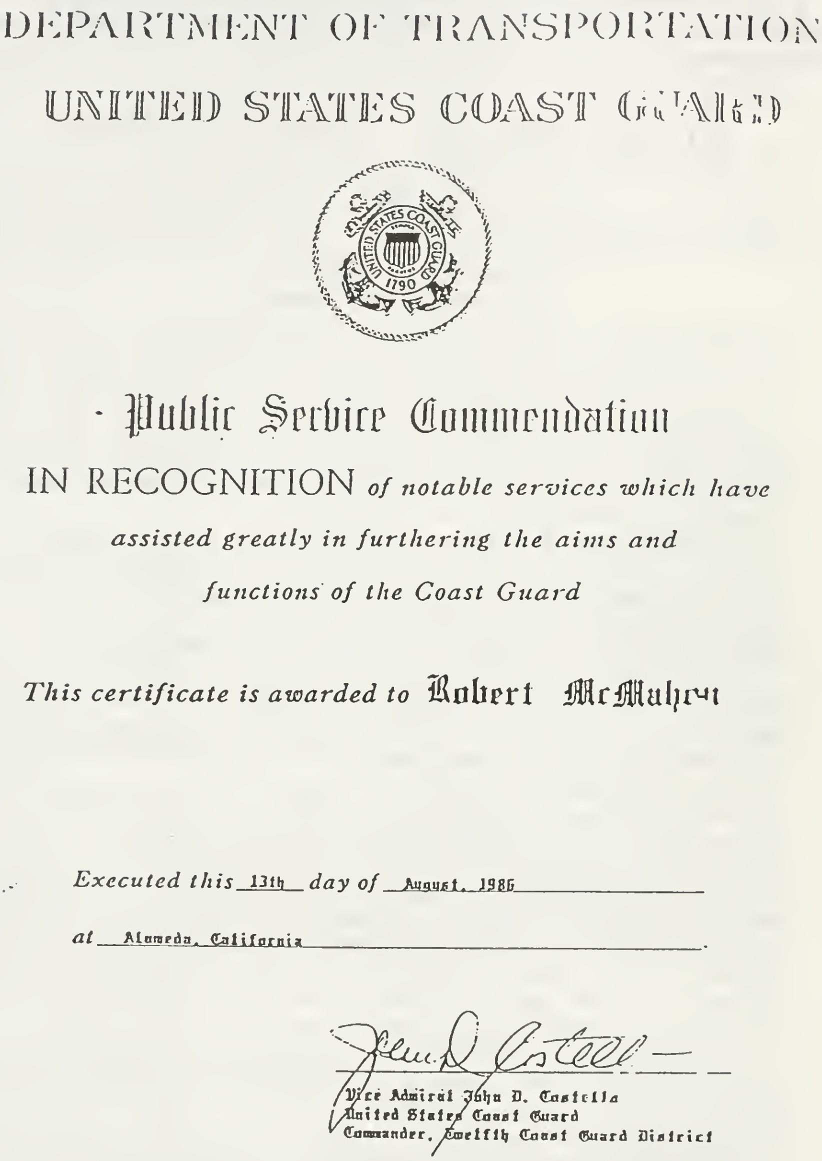
On numerous occasions, Robert McMahon has been the first on scene to render aid to stricken mariners, often at great risk to his vessel and crew. He has stayed on scene for long hours until the cases were completed, supplying the Coast Guard with onscene communications.

On October 24, 1985, the fishing vessel Cuu Long became disabled. McMahon provided a Vietnamese interpreter to assist the Coast Guard with communications, and closely followed the case until the vessel was safely moored at Pillar Point Harbor.

During severe weather, in December 1985, the fishing vessel Wynn D II began taking on water, and minutes later the sailing vessel Girlfriend III called a mayday. McMahon mustered a boat and crew for assistance. Due to excessive radio traffic on channel 16, McMahon coordinated his rescue effort with Coast Guard Group San Francisco by landline. He also coordinated a beach search of the entire Half Moon Bay coastline looking for survivors. He stayed on the case to its conclusion some 24 hours later.

On February 22, 1986, a vessel capsized outside Pillar Point Harbor during rough seas. Again, at great risk to himself and his crew, McMahon assisted the Coast Guard in the rescue of two people.

These are but a few examples of McMahon's lifesaving services, and assistance to the United States Coast Guard with its search and rescue missions. Such courage, eagerness and dedication is heartily commended by the United States Coast Guard, and is in keeping with the highest traditions of the sea.



DEPARTMENT OF TRANSPORTATION

UNITED STATES COAST GUARD

Public Service Commendation

IN RECOGNITION *of notable services which have assisted greatly in furthering the aims and functions of the Coast Guard*

This certificate is awarded to Robert McMahon

Executed this 13th *day of* August, 1986

at Alameda, California.

Vice Admiral John D. Costello
United States Coast Guard
Commander, Twelfth Coast Guard District

LETTER FROM JOHN D. COSTELLO, VICE ADMIRAL, U.S. COAST GUARD

COMMANDER, PACIFIC AREA
UNITED STATES COAST GUARD
ALAMEDA, CALIFORNIA 94501

11 September 1986

Mr. Gene Flocks, President
Board of Harbor Commissioners
Number One Johnston Pier
Half Moon Bay, CA 94019

Dear President Flocks,

I intend to present Mr. Robert McMahon, the Pillar Point Harbormaster with the Coast Guard Public Service Commendation award at 2:00pm on Monday 29 September 1986 at the Pillar Point pier.

Mr. McMahon has been instrumental on numerous occasions of rendering aid to mariners in distress in the Pillar Point area, often at risk to himself and his crew. His dedication to providing humanitarian aid while assisting the Coast Guard in search and rescue missions should be recognized in this appropriate and significant manner. My public affairs branch will arrange for press coverage of this event.

I look forward to meeting you and presenting this award.

Sincerely,

John D Costello

JOHN D. COSTELLO
Vice Admiral, U. S. Coast Guard

DEPARTMENT OF TRANSPORTATION

UNITED STATES COAST GUARD

Public Service Commendation

IN RECOGNITION *of notable services which have assisted greatly in furthering the aims and functions of the Coast Guard*

This certificate is awarded to

ROBERT A. McMAHON

Executed this 14th *day of* April, 1983

at San Francisco, California.

Charles E. Larkin

VICE ADMIRAL CHARLES E. LARKIN, USCG
Commander, 12th Coast Guard District
By direction of the Commandant

LETTER FROM C.E. LARKIN, VICE ADMIRAL, U.S. COAST GUARD

COMMANDER, PACIFIC AREA
AND TWELFTH COAST GUARD DISTRICT
SAN FRANCISCO, CALIFORNIA 94126

24 February 1983

Mr. Robert A. McMahon
Harbormaster
1 Johnson Pier
Half Moon Bay, CA 94019

Dear Mr. McMahon:

It is a great pleasure to thank you and Patrolman Peter B. Costello for your outstanding efforts in responding to the perilous situation on board the fishing vessel EL SALVATORE the night of February 22, 1983. The sudden fire which erupted on the vessel forced the four crewmen to abandon the EL SALVATORE into their small skiff. Large offshore swells quickly capsized the skiff plunging the crew into the frigid waters off Half Moon Bay. Your superb readiness and prompt response allowed for the quick recovery of the crewmen and immediate administration of vital first aid including cardiopulmonary resuscitation. As a direct result three lives were saved.

The Pillar Point Harbor Patrol is held in high regard. Your timely, forthright actions during this dramatic rescue serve to underscore that excellent reputation.

Please accept and forward to Mr. Costello my heartfelt appreciation and best regards. I look forward to continued close cooperation with your fine organization.

Sincerely,

C. E. LARKIN
Vice Admiral, U. S. Coast Guard

Public Service Commendation

to

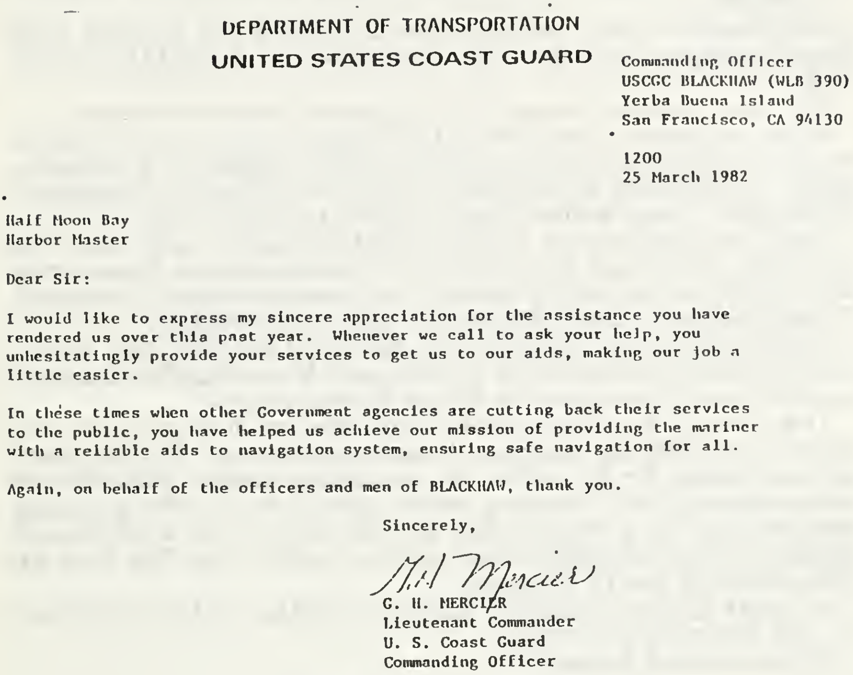
ROBERT A. MCMAHON

Robert A. McMahon is cited for courage and initiative while manning the Pillar Point Harbormaster's launch during the successful rescue of four survivors from the fire aboard the Fishing Vessel EL SALVATORE on the evening of 22 February 1983. While the EL SALVATORE was engaged in fishing, an engine room fire broke out which eventually engulfed the entire vessel. The four crewmembers on board where forced to abandon ship into a small skiff that later capsized in the 12 to 15 foot seas sending the men into the chilly waters off Pillar Point, California. A major coordinated search effort was commenced utilizing a Coast Guard helicopter and cutter, a California Air National Guard helicopter and fixed wing aircraft, and the Pillar Point Harbormaster's 32 foot launch. Guided by illumination flares dropped by the Air National Guard aircraft and the searchlight from the Coast Guard helicopter, the launch was surely and expeditiously manuevered through the heavy seas in order to recover all four men. Despite the quick and knowledgeable recognition, the treatment of all the men for hypothermia was complicated because one man required cardio-pulmonary resuscitation(CPR). CPR was successfully administered and the survivor was revived, but as the man was about to be hoisted into the Coast Guard helicopter he experienced a relapse. At this point a hospital corpsman was lowered to assist in two-man CPR for the transit back to shore. All the survivors were delivered to an awaiting ambulance for transportation to a hospital where, in spite of the efforts of the personnel on the launch, hospital physicians were unable to sustain the vital signs and one man died in the early morning hours of 23 February. The immediate response, skillful transit of the heavy seas and timely administration of first aid and CPR undoubtedly averted the tragic loss of life. Such courage, persistence, eagerness and dedication is heartily commended by the United States Coast Guard and is in keeping with the highest traditions of rendering aid to fellow seaman.

C. E. LARKIN
VICE ADMIRAL, U.S. COAST GUARD
Commander, Twelfth Coast Guard District

By direction of the Commandant

LETTER FROM LT. CMDR. G.H. MERCIER, U.S. COAST GUARD



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Commanding Officer
USCGC BLACKHAW (WLB 390)
Yerba Buena Island
San Francisco, CA 94130

1200
25 March 1982

Half Moon Bay
Harbor Master

Dear Sir:

I would like to express my sincere appreciation for the assistance you have rendered us over this past year. Whenever we call to ask your help, you unhesitatingly provide your services to get us to our aids, making our job a little easier.

In these times when other Government agencies are cutting back their services to the public, you have helped us achieve our mission of providing the mariner with a reliable aids to navigation system, ensuring safe navigation for all.

Again, on behalf of the officers and men of BLACKHAW, thank you.

Sincerely,

G.H. Mercier
G. H. MERCIER
Lieutenant Commander
U. S. Coast Guard
Commanding Officer

STATEMENT OF U.S. REPRESENTATIVE TOM LANTOS OF CALIFORNIA

I am writing on behalf of the San Mateo County Harbor District located in my congressional district in Northern California.

I would like to request an appropriation for $400,000, to initiate a reconnaissance feasibility study by the Army Corps of Engineers for channel deepening in the Pillar Point Harbor area. Pillar Point Harbor primarily serves the commercial fishing industry, which is an extremely valuable resource for the economy of San Mateo County. The Harbor also offers many benefits to the sport fishing industry as well as recreational boat users from the seven county region surrounding Pillar Point.

In an area covering more than 30 miles of coastline, between San Francisco and Santa Cruz, Pillar Point Harbor was created as a "Safe Harbor of Refuge for all the boaters who had no safe port. With its own Search and Rescue unit, averaging over 100 rescues per year, the Harbor District has eliminated the need for a Coast Guard facility at the location, thus reducing spending by the Federal Government.

In over 30 years Pillar Point Harbor has not required dredging or any other major work. After this period of time and with the continual use of the Harbor, such work may now be necessary. This $400,000 feasibility study will enable the Army Corps of Engineers to make a reasonable decision.

Mr. Chairman, I am most grateful for this opportunity to appear before your Subcommittee, and I would appreciate your favorable consideration of this request.

PORT OF LOS ANGELES, CA

STATEMENT OF VERNON HALL, CHIEF ENGINEER, PORT OF LOS ANGELES

Mr. LANGNER. Now, south again to the Port of Los Angeles, chief harbor engineer, and the new chairman-elect of C–MANC, Vern Hall.

Mr. HALL. Good afternoon, Mr. Chairman, Senator Feinstein.

Major expansion of the Port of Los Angeles, which we have called the 2020 plan, was authorized back in 1986. Subject to a favorable report by the Chief of Engineers of the Army Corps of Engineers, for the last 7 years we have been working to achieve that.

And I am very pleased to report that during the past year, the feasibility study and final EIS were completed and Washington level review is currently underway. In these documents, a potential Federal interest of about $98 million has been identified.

However, this only represents 20 percent of the total cost. So the local interest, the Port of Los Angeles, still has a significant investment in these future projects, future Federal projects.

This year—I am laying that today, because next year we are going to be testifying regarding future requirements. But this year, we are asking for $2 million in continuing design; $525,000 for maintenance of the Vicksburg model, which is now serving, among other things, as a design tool; and $1 million for maintenance dredging of our channels, which we have—this is the first time we have asked for this in 10 years.

So thank you very much for hearing us today. And you will have our full testimony in writing.

[The statement follows:]

STATEMENT OF VERNON E. HALL

Mr. Chairman and members of the subcommittee, I am Vernon E. Hall, Chief Harbor Engineer for the Port of Los Angeles. My testimony today, on behalf of the Board of Harbor Commissioners and the City of Los Angeles, supports the continuation of the federal role in the implementation of major navigation improvements in the San Pedro Bay.

2020 DEVELOPMENT PLAN

The 2020 Development Plan, as jointly undertaken by the Port of Los Angeles and the U.S. Army Corps of Engineers, was authorized 1986 by Congress. Implementation of the initial phase of the 2020 Plan was authorized in Section 201(b) of the Water Resources Development Act of 1986 (Public Law 99–662) and further sanctioned in Section 104 of the Water Resources Development Act of 1988 (Public Law 100–371). This far-sighted action accurately anticipated the phenomenal growth of the San Pedro Bay ports of Los Angeles and Long Beach which, today, form one of the largest port complexes in the world. The Port of Los Angeles, alone, is the busiest U.S. port and is the number one container port in the United States serving as the nations gateway to the ever-growing Pacific Rim maritime trade.

The 2020 Plan outlines the improvements and expansion that are required for the San Pedro Bay ports, including new deep-draft navigation channels, in order to keep pace with the projected increase in world commerce as we enter the 21st Century. The continued growth of the Port of Los Angeles depends upon continued federal support of essential on-going port development activities. The federal Feasibility Study, which delineates the elements of Phase I of the 2020 Plan and establishes the federal interest and cost share, as well as the Environmental Impact Statement (EIS), were finalized in September, 1992. The Feasibility Study also evaluates and quantifies the national economic development benefits associated with the transportation cost savings of the channel deepening projects. The Feasibility study and the EIS have met strict engineering economic and environmental tests prior to finalization.

A Division Engineers (DE) Notice was issued on September 30, 1992, by the Commander of the Corps' South Pacific Division, thereby formally commencing the Washington Level Review process (the Chief of Engineer's Report will follow and is expected to be approved later this year). Upon issuance of the DE Notice, the Corps of Engineers initiated the preconstruction, engineering and design (PE&D) phase. In line with this, the Administration's fiscal year 1994 budget includes a request of $2 million for PE&D. The Port of Los Angeles supports this request which will ensure uninterrupted implementation of navigation project design for Phase I.

VICKSBURG MODEL

Also essential to the successful implementation of the navigational improvements at the Port is the ongoing work by the U.S. Army Corps of Engineers Waterways Experiment Station (WES) at Vicksburg, Mississippi. At WES, the Corps conducts invaluable studies on harbor wave and tidal resonance. The fiscal year 1994 federal budget proposes an appropriation of $155,000 for the continued routine maintenance of the hydraulic physical model of the Ports of Los Angeles and Long Beach. In addition to the federal budget request, the Port of Los Angeles requests another appropriation of $150,000 for a one-time overhaul of the model which is needed to maintain its integrity and future utilization, as well as $200,000 for wave data acquisition and wave gauge maintenance. Therefore, we urge this Subcommittee to appropriate a total of $525,000 to support the continuation of this critical work by WES.

MAINTENANCE DREDGING

We also urge this Subcommittee to include an appropriation of $1 million for harbor maintenance dredging of the existing federal channels at the Port of Los Angeles. The harbor dredging was completed in the early 1980's. The Corps of Engineers dredged five channels at the Port of Los Angeles from a depth of 35 feet to 45 feet. It has been almost ten years since this first channel deepening project was completed, and the channels now require maintenance dredging to maintain their depth of 45 feet. This channel deepening project resulted in an enormous expansion in trade for the Port of Los Angeles, and it is the traditional role of the Corps of Engineers to maintain the channel through the Harbor Maintenance Trust Fund. In fiscal year 1993, approximately $2 million was appropriated for maintenance dredging at the mouth of the Los Angeles River in the City of Long Beach. The $1 million appropriation we are seeking today for the maintenance dredging of the Los Angeles Harbor navigation channels is unrelated to the Los Angeles River project of last year.

FUTURE CONSTRUCTION SCHEDULE

In order to maintain the Ports expansion schedule (as outlined in the June 27, 1987 Memorandum of Understanding between the Port and the Corps), the Port has already spent an initial $7 million and plans to spend a great deal more before returning to this Subcommittee to request the federal share of the channel deepening project, as identified in the Feasibility Study. Indeed, of the $474 million that will be spent on the project, the federal share is only $98 million, or just 20.7 percent of total project cost.

SUMMARY

In summary, the Port of Los Angeles strongly urges your Subcommittee to include in its fiscal year 1994 budget, $2 million for PE&D efforts, $525,000 for the continuation of hydraulic model at WES, and $1 million for maintenance dredging of the Los Angeles Harbor Channel.

The Port of Los Angeles has long valued the vision of this Subcommittee in appropriating scarce federal resources to harbor and navigation projects such as ours. We view this commitment to the expansion of water-borne transportation as a demonstration by the federal government of its support for the nation-wide economic development in which the nations port authorities play an important and indispensable role.

Thank you, Mr. Chairman, for allowing me to testify and to inform you of the progress that we at the Port of Los Angeles are making towards the goals that we have identified.

DREDGED MATERIAL UPLAND DISPOSAL DEMONSTRATION PROJECT

STATEMENT OF DAVE KARP, MAYOR, SAN LEANDRO, CA

Mr. LANGNER. The mayor of San Leandro, Dave Karp.

Mr. KARP. Thank you very much, Mr. Chairman, Senator Feinstein. Go Giants. [Laughter.]

Mr. KARP. I am here today to talk about a long-term management strategy [LTMS] program. This program is sponsored by a number of the Congressmen in the area, primarily Vic Fazio, as well as a program sponsored by the Army Corps of Engineers.

The program is removal of dredge material by rail, primarily to put on land sites. Right now, the San Francisco Bay is pretty much filled in the areas that we use for disposal. The ocean has some problems in disposing of the product into the ocean.

What we are trying to do is remove, by rail, the dredge materials to land sites. Economically, we are going to study this. It is a demonstration project.

And just to give you one brief outline, what we are talking about is on a trainload, you are talking about 25,000 truck trips, which normally would be moving a distance of 50 miles each, in one trainload or in a trainload.

So, we are talking about the best way of removing the dredge materials. I have submitted the documents and background material. And we hope you support it.

Thank you very much.

[The statement follows:]

STATEMENT OF DAVID KARP

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, I AM MAYOR DAVE KARP OF THE CITY OF SAN LEANDRO, CALIFORNIA. IT IS GOOD TO BE WITH YOU AGAIN, AND I WANT TO JOIN TODAY WITH ALL MY C-MANC COLLEAGUES IN THANKING YOU FOR ONCE AGAIN HOSTING US TO DISCUSS WITH YOU THE NEEDS WE FACE IN CALIFORNIA AS YOU DEVELOP THE ENERGY AND WATER DEVELOPMENT APPROPRIATIONS BILL FOR FISCAL 1994.

I AM HERE TO THANK YOU FOR YOUR PAST SUPPORT FOR MAINTENANCE DREDGING OF THE JACK D. MALTESTER FEDERAL CHANNEL AND THE SAN LEANDRO MARINA, MOST RECENTLY IN THE 1993 BILL, AND TO REQUEST THAT YOU INCLUDE FUNDING FOR A UNIQUE DREDGING-RELATED DEMONSTRATION PROJECT IN YOUR FISCAL 1994 BILL.

THE ARMY CORPS OF ENGINEERS WILL DREDGE THE FEDERAL CHANNEL AND THE SAN LEANDRO MARINA CHANNEL LATER THIS YEAR. WE IN SAN LEANDRO GREATLY APPRECIATE PROVISION OF FUNDING FOR THIS ACTIVITY IN THIS ERA OF SEVERE FISCAL CONSTRAINTS. THIS SUBCOMMITTEE HAS CONSISTENTLY DEMONSTRATED THE VALUE AND NECESSITY OF FEDERAL INVOLVEMENT IN BUILDING PUBLIC PROJECTS, PROVIDING JOBS AND PUBLIC INFRASTRUCTURE IN SUPPORT OF ECONOMIC DEVELOPMENT AND GROWTH.

AS I KNOW THIS SUBCOMMITTEE IS AWARE, WE IN THE BAY AREA FACE SIGNIFICANT CHALLENGES IN MANAGING AND DISPOSING OF DREDGED MATERIALS. IN SAN LEANDRO WE EXPECT THAT THIS YEAR'S DREDGING WILL PRODUCE APPROXIMATELY 190,000 CUBIC YARDS OF DREDGED MATERIAL. DUE TO ENVIRONMENTAL MITIGATION REQUIREMENTS THIS MATERIAL MUST BE REMOVED FROM OUR CITY'S INTERIM DREDGE DISPOSAL SITE IN 1994.

WORKING IN CONSULTATION WITH OUR SAN FRANCISCO DISTRICT CORPS OF ENGINEERS OFFICE WE HAVE DEVELOPED AN INNOVATIVE PLAN TO UTILIZE SPECIALLY DESIGNED RAIL CARS TO TRANSPORT THIS MATERIAL AND FACILITATE ITS BENEFICIAL REUSE AS CAPPING MATERIAL AT A LOCAL REGIONAL LANDFILL, WITH WHICH THE CITY HAS AN EXISTING ARRANGEMENT FOR USE OF DREDGED MATERIAL FROM PREVIOUS DREDGING CYCLES.

THIS PROPOSED DEMONSTRATION PROJECT WILL SHOW THAT RAIL DISPOSAL OF DREDGED MATERIAL IS A VIABLE AND COST-EFFECTIVE MANAGEMENT OPTION. IT WILL REDUCE TRAFFIC CONGESTION, AIR AND

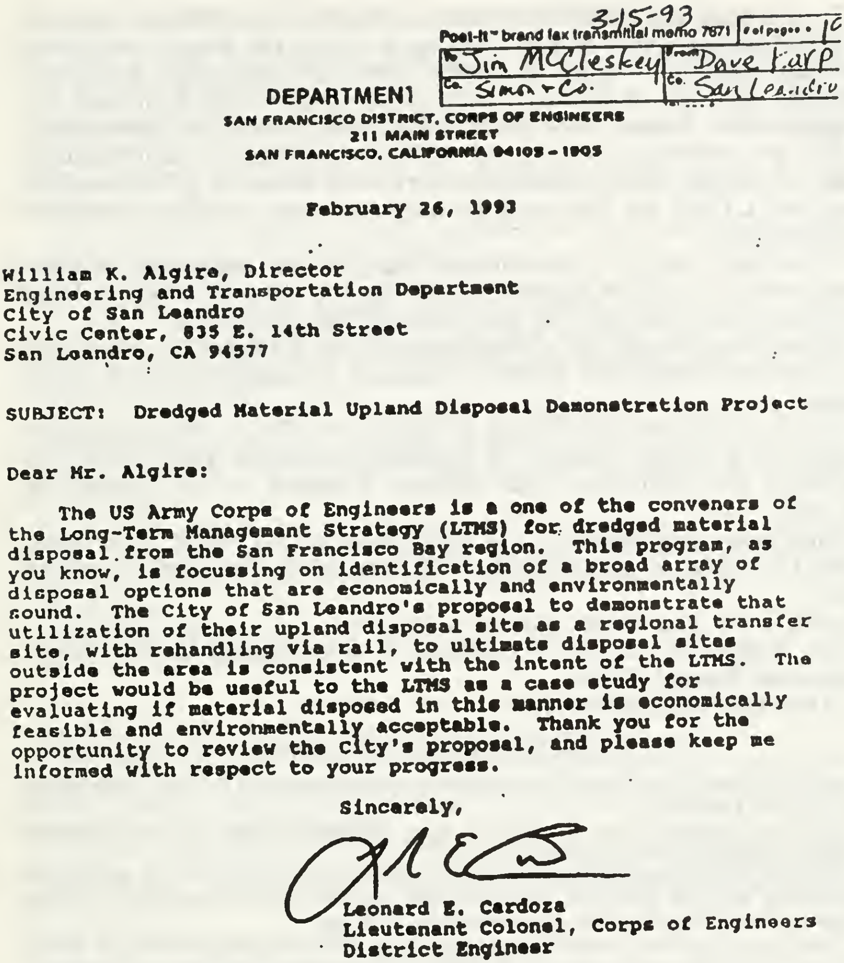
NOISE POLLUTION AND POTENTIAL SAFETY PROBLEMS ASSOCIATED WITH TRUCK TRANSPORT OF THESE MATERIALS BY REMOVING THE EQUIVALENT OF 80 TRUCKLOADS WITH ONE TRAIN LOAD. AND IT WILL FACILITATE THE BENEFICIAL REUSE OF THIS MATERIAL AS PART OF AN OVERALL SOLUTION TO THE BAY-AREA DREDGED MATERIAL MANAGEMENT ISSUE.

LAST MONTH, THE SAN FRANCISCO DISTRICT OFFICE OF THE CORPS INFORMED THE CITY OF SAN LEANDRO IN WRITING THAT THIS PROPOSED DEMONSTRATION PROJECT IS, AND I QUOTE, "CONSISTENT WITH THE INTENT OF THE LONG TERM MANAGEMENT STRATEGY FOR DREDGED MATERIAL DISPOSAL FROM THE SAN FRANCISCO BAY REGION," AND THAT "THE PROJECT WOULD BE USEFUL TO THE LTMS AS A CASE STUDY FOR EVALUATING IF MATERIAL DISPOSED IN THIS MANNER IS ECONOMICALLY FEASIBLE AND ENVIRONMENTALLY ACCEPTABLE."

THE CORPS IS SUPPORTIVE OF THIS PROJECT'S FUNDING AND I HOPE THAT YOU WILL BE ABLE TO INCLUDE A $3.6 MILLION FEDERAL SHARE FUNDING DESIGNATION FOR THIS PROJECT IN REPORT LANGUAGE FOR YOUR FISCAL 1994 BILL. I HAVE INCLUDED A COPY OF THE CORP'S LETTER WITH MY WRITTEN STATEMENT, ALONG WITH ADDITIONAL BACKGROUND MATERIALS.

I WOULD ALSO LIKE TO USE THIS OPPORTUNITY TO URGE THIS COMMITTEE TO TAKE POSITIVE AND RAPID ACTION TO MOVE THE PRESIDENT'S STIMULUS PACKAGE. AS A MAYOR, I CAN TELL YOU THAT WE HAVE A GREAT MANY IMPORTANT JOBS-PRODUCING INFRASTRUCTURE INVESTMENT PROJECTS IN SAN LEANDRO WHICH ARE "READY TO GO," AND WE WILL BE WORKING HARD TO DO OUR PART TO SEE THAT THE STIMULUS FUNDS ARE PUT TO GOOD AND EFFECTIVE USE.

THANK YOU AGAIN FOR THIS OPPORTUNITY TO ADDRESS YOU, AND FOR YOUR SUPPORT FOR OUR MAINTENANCE DREDGING AND THIS DREDGED MATERIAL MANAGEMENT PROJECT. I WILL BE PLEASED TO ADDRESS ANY QUESTIONS YOU MAY HAVE.



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To Jim McCleskey | From Dave Karp
Co. Simon + Co. | Co. San Leandro

DEPARTMENT
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
211 MAIN STREET
SAN FRANCISCO, CALIFORNIA 94105 – 1905

February 26, 1993

William K. Algire, Director
Engineering and Transportation Department
City of San Leandro
Civic Center, 835 E. 14th Street
San Leandro, CA 94577

SUBJECT: Dredged Material Upland Disposal Demonstration Project

Dear Mr. Algire:

The US Army Corps of Engineers is a one of the conveners of the Long-Term Management Strategy (LTMS) for dredged material disposal from the San Francisco Bay region. This program, as you know, is focussing on identification of a broad array of disposal options that are economically and environmentally sound. The City of San Leandro's proposal to demonstrate that utilization of their upland disposal site as a regional transfer site, with rehandling via rail, to ultimate disposal sites outside the area is consistent with the intent of the LTMS. The project would be useful to the LTMS as a case study for evaluating if material disposed in this manner is economically feasible and environmentally acceptable. Thank you for the opportunity to review the City's proposal, and please keep me informed with respect to your progress.

Sincerely,

Leonard E. Cardoza
Lieutenant Colonel, Corps of Engineers
District Engineer

PORT OF STOCKTON, CA

STATEMENT OF ALEXANDER KRYGSMAN, PORT DIRECTOR, PORT OF STOCKTON

ACCOMPANIED BY RONALD W. COALE, COMMISSIONER, PORT OF STOCKTON

Mr. LANGNER. Now, to the Port of Stockton, the longtime port director and experienced witness, if I may say so, Capt. Lex Krygsman.

Mr. KRYGSMAN. Mr. Chairman and Senator Feinstein, pleased to see you here.

I have submitted my written statement for the record. And I have brought, as I have been doing for the last 15 years, one of our colorful publications so you pay attention that we exist. We are kind of up the river, especially since San Francisco does not think that we are back there.

In the past, the difficulties and the attention has mostly been on a lot of new projects, and so were ours, but in the future—and now we start getting as much or maybe more concerned with the maintenance of those channels, where in the past we kind of took for granted that if they were created that they would be maintained.

We are extremely concerned with the continued maintenance. And, of course, San Francisco is very well aware of it in Oakland and the LTMS, for the need for disposal sites. And we have the same thing.

I just also want to point out one thing in our testimony. We are supporting $1 million appropriations for the John F. Baldwin Ship Channel—the channel that goes through San Pablo Bay.

If you want to get out of Stockton and you go down the river and you cannot through the Baldwin Channel, you cannot get out to the ocean.

We have asked the Corps of Engineers for a reconnaissance study for a 40-foot channel to Stockton, or maybe even more, but we could not fulfill that if the Baldwin Channel is not deepened to 40 feet.

That was authorized in the midsixties. And I think it is about time that that is constructed. So I just wished to point it out to you.

And thank you for the time to testify.

Mr. LANGNER. Captain Krygsman is accompanied by Port Commissioner Ronald Coale.

[The statement follows:]

STATEMENT OF ALEXANDER KRYGSMAN

Mr. Chairman, I am Alexander Krygsman, Port Director of the Port of Stockton in Stockton, California.

The San Francisco Bay to Stockton Ship Channels Project is an authorized project, presently under construction.

The Port of Stockton is primarily a bulk port that serves industry and agriculture in the San Joaquin Valley in California, and the bulk imports and exports of the Western States, including the coal areas of these States.

The Port of Stockton recognized as far back as 1952 that deeper channels would be needed for the movements of bulk cargoes and requested the Corps of Engineers to deepen the channel in 1952. Coal, grain, fertilizers and many other bulk materials require deeper channels to serve the larger bulk carriers.

The Nation needs ports that can handle larger, more economical and more fuel-efficient vessels close to the production areas, both agricultural and industrial, to conserve energy.

The Port of Stockton is such a port.

The dredging of the Stockton Channel portion was completed in 1987. A copy of the Port of Stockton's most recent annual report is attached. Cargo volume has increased since the dredging of the Stockton Channel was completed; and the project is certainly paying off.

Therefore, we have requested the Corps of Engineers for a potential new navigation study to deepen the Channel further to forty (40) feet or more, if economically feasible.

For the 1994 fiscal year, there are no funds requested for this study, as it has to be coordinated for proper timing with the continuing construction of the John F. Baldwin Channel. Depending on the progress of that project, funds will be requested for the 1995 fiscal year for the study.

We urge you to appropriate one million dollars ($1,000,000) to continue the John F. Baldwin Project. We also strongly urge that adequate funding be appropriated to maintain the channels so that the benefits may continue to accrue.

VENTURA HABOR NAVIGATION IMPROVEMENTS

STATEMENT OF RICHARD W. PARSONS, GENERAL MANAGER, VENTURA HARBOR

Mr. LANGNER. Next, we have Richard Parsons, general manager of Ventura Harbor.

Mr. PARSONS. Mr. Chairman, Senator Feinstein, I thank you for hearing me today.

I have appeared before this committee for the past 10 years in support of a project to improve the Ventura Harbor entrance channel.

Today, I am pleased to say that this will probably be the last time we will be requesting your generous support. You have supported us over these past 10 years. We are now seeking the final construction moneys.

Last year, you provided the initial construction moneys. We are requesting in the 1994 budget that you provide $4.8 million or this cost-share project, with the port district providing 20 percent of the total funding.

I am also urging that you provide $1.2 million in O&M moneys for the maintenance of the Federal channel. I have a more complete statement for the record that I would ask that you enter.

Thank you.

Senator JOHNSTON. It will be done. Thank you.

[The statement follows:]

STATEMENT OF RICHARD W. PARSONS

The Ventura Port District respectfully requests that the Congress:

(1) Include $1,200,000 in the fiscal year 1994 Energy and Water Development Appropriations Bill for the maintenance dredging of the harbor's federal entrance channel by the U.S. Army Corps of Engineers. The Corps of Engineers area of responsibility is illustrated in Photo No. 1.

(2) Include $4,838,000 in the fiscal year 1994 Energy and Water Development Appropriations Bill to complete construction of the navigation improvements to the Ventura Harbor Entrance Channel as authorized by the Water Resources Development Act of 1990.

BACKGROUND

Ventura Harbor is located along the Southern California coastline in the City of San Buenaventura, approximately 60 miles northwest of the City of Los Angeles. The harbor opened in 1963. Annual dredging of the harbor entrance area is usually necessary inorder to assure a navigationally adequate channel. In 1968, the 90th Congress made the harbor a Federal project and committed the U.S. Army Corps of Engineers to provide maintenance dredging and a solution to the entrance shoaling problem. A detached breakwater and sand trap area, completed by the Corps of Engineers in 1972, alleviated some of the more damaging difficulties but continuing navigational problems have persisted. Additionally, the need for annual maintenance dredging continued, and the Corps of Engineers and the Ventura Port District have conducted maintenance dredging of the harbor entrance within the limits of their respective jurisdiction from 1968 through the present time.

The harbor presently generates more than $30 million in gross receipts annually. That of course translates into thousands of both direct and indirect jobs. A significant portion of those jobs are associated with the commercial fishing industry and with vessels serving the offshore oil industry. Additionally, the headquarters for the Channel Islands National Park is located within the harbor, and the commercial vessels transporting visitors to and from the Park are now carrying about 75,000 people per year. All of the operations of the harbor, particularly those related to commercial fishing and the support boats for the oil industry, are highly dependent upon a navigationally adequate entrance to the harbor.

AUTHORIZED AND FUNDED IMPROVEMENTS

The FY 93 Energy and Water Development Appropriations Bill provided the initial construction funds for the improvements to the Ventura Harbor Entrance Channel as authorized in the Water Resources Development Act of 1990. Funds to complete the project are now being requested. The navigation improvements will reduce shoaling and wave action in the entrance channel and include the following components:

—A 300 ft. spur groin at the end of the north jetty to improve the deflection of littoral sand flows into sand trap B;

—A 300 ft. dogleg extension to the south end of the detached breakwater to provide improved wave sheltering for vessels transiting the entrance;

—A 650 ft. groin on the south beach approximately 1000 ft. downcoast from the south jetty to provide a mechanism for trapping drift material from the south; and

—Deepening and extending the entrance channel and sand trap A to provide for improved wave height attenuation and for additional sand storage volume.

The construction of the above features will also place the maintenance dredging of the entrance channel and sand trap areas on a biennial cycle rather than the present annual cycle. This achieves a $320,000 reduction in average annual maintenance costs, and is thus a key component in the 1.4:1 benefit/cost ratio justifying the $7.5 million project. Average annual costs for this project are estimated at $694,450. Average annual benefits, primarily savings in maintenance costs and commercial fishing losses, are estimated at $1,023,340.

The Ventura Port District, as the local project sponsor, is committed to funding 20 percent of the improvement cost. In order to assure the availability of the local share, the Port on March 15, 1991, secured a loan in the amount of $1.6 million from the California Department of Boating and Waterways.

The Congress is urged to include $4,838,000 in the fiscal year 1994 Energy and Water Development Appropriations Bill in order to assure that the construction of these vitally needed improvements can be completed during fiscal year 1994.

OAKLAND HARBOR, CA, INNER AND OUTER HARBOR CHANNELS

STATEMENT OF PATRICK RYAN, ASSISTANT DIRECTOR OF GOVERNMENT AFFAIRS, PORT OF OAKLAND, CA, MARINE AFFAIRS AND NAVIGATION CONFERENCE

Mr. LANGNER. A facility for which Mayor Feinstein is well familiar, the Port of Oakland, represented by Pat Ryan, assistant director of government affairs.

Mr. RYAN. Thank you. Good afternoon, Chairman Johnston, Senator Feinstein.

I am pleased to present testimony on behalf of the Port of Oakland channel improvement project. This project is the most vital element necessary for our continued growth and a most important economic factor in the bay area economy.

The appropriations this committee is considering today will assure our channel deepening will go forward and that the necessary studies will be completed prior to construction.

Thank you for your past support. And, again, I thank the committee for the opportunity to submit testimony regarding these critical appropriations.

I am also submitting testimony for California State Senator Milton Marks, chairman of the Select Committee on Maritime.

Senator Marks points out the critical nature of the LTMS program in the bay area, the added importance of the dredging due to possible base closure, and economic and social dislocations.

He notes the drop in worldwide standing for the Port of Oakland and the need for dredging. He wishes to acknowledge and thank you for the completion of the 38-foot project and urges your support and continued funding for construction and O&M.

He also wishes to thank you for the continued support of the Petaluma River dredging and the funding for the San Rafael Creek and San Clemente Creek flood control projects.

Thank you very much.

Mr. LANGNER. Thank you.

[The statements follow:]

STATEMENT OF CALIFORNIA STATE SENATOR MILTON MARKS

Mr. Chairman and Members of the Subcommittee, I appreciate this opportunity to provide testimony on the fiscal year 1993 Appropriations for Water Resources and Development.

I am here to tell you that completion of the Long Term Management Strategy for San Francisco Bay is more critical than ever because of the disastrous economic consequences for the Bay Area regional economy if the proposed Base Closures become a reality. It is imperative that we complete the work to effect a policy that will allow for predictable, environmentally and economically sound disposal of dredged material. Progress has been made in dispelling the perception that disposal of dredged material is per se an adverse activity. More importantly, the LTMS has served as a forum bringing together the myriad regulatory agencies, users and other interested parties in order to resolve what had become a very contentious issue. Anticipating designation of an ocean site, implementation committees began work last fall to ensure that the ocean and upland sites will be usable at the conclusion of the LTMS work.

Your support of the Long Term Management Strategy is vitally important to the San Francisco Bay Region's economy. If the funding is not provided to bring this work to fruition, the continued viability of the Port of Oakland is at risk, with commerce and national security implications and a negative impact on federal, state and local budgets. The most recent economic study indicated the Port generates 44,000 jobs and has a $4 billion impact on the Bay Area's economy.

The "1991 Containerisation International Yearbook" listed Oakland as the world's 18th largest container port. Although the berths will accommodate them, the new generation of large ships cannot get into or out of the Port fully laden, and Oakland continues to lose cargo, having dropped to 19th in the 1993 International Yearbook report. Oakland continues to be the shallowest major container port in the world.

Designation of dredged material disposal sites and implementation of their use must continue to be expedited as much as is humanly possible. Without completion of the Long Term Management Strategy, no site will be available.

The success of LTMS, which the Corps Division Headquarters in San Francisco conceived, and the very timely completion of the Port of Oakland 38-foot project would not have been possible if the Division's Headquarters had been in Seattle. I am encouraged that the decision to relocate The Corps division headquarters is being reconsidered.

In closing, I want to thank you for the prompt completion of the first phase of Oakland's 38-foot project because it has sent a very positive message to the trade community, and urge you to continue funding for O&M and especially for construction of the 42-foot project that will accommodate the deeper draft new generation vessels Maersk, APL and others lines are using to serve Pacific Rim ports.

Also, I would like to convey my special appreciation for your continuing support of the Petaluma River dredging and your previous funding for the San Rafael Creek and San Clemente Creek flood control projects because this work is of great importance to the Sonoma and Marin County constituents I represent.

My colleagues in the Legislature and I also appreciate your support for the other California projects that will be proposed in the President's budget. We hope that you will be able to approve funding for these important projects, and thank you for your consideration of California's navigation needs.

STATEMENT OF PATRICK RYAN

I want to thank you for the opportunity of submitting written testimony in support of appropriations that are under consideration by the Senate Subcommittee on Energy & Water Development. These appropriations, as recommended by the California Marine Affairs and Navigation Conference (C–MANC), and necessary to maintain the ongoing projects provide $2.5-million for continuation of studies that will lead to construction of the 42-foot Oakland Harbor Channels, and provide $3-million for annual operation and maintenance related to the Oakland harbor.

We are pleased to report the December 1992 completion of Phase 1, deepening the Oakland inner Harbor to a depth of −38 feet. We particularly appreciate past actions that have been taken by you and the Senate committee with respect to ongoing appropriations that have now brought us to the point where actual construction of the −42-foot Oakland Channel deepening can commence.

The Oakland Harbor Channel Improvement is a federally authorized project undertaken by the U.S. Army Corps of Engineers. The project was authorized for construction by the Water Resources Development Act of 1986, 99th Congress Second Session, as a part of Public Law 99–662.

The project will deepen the channels to −42 feet below mean lower low water (MLLW), and provide additional navigational improvements. Approximately 5.5 million cubic yards of material must be dredged to provide the necessary channel improvements.

The Corps estimates the direct navigational benefits of the project to the economy of the United States will be approximately $27-million annually. Benefits of the project are derived from:

—The use of larger vessels with lower operation cost and lower fuel consumption per ton of cargo carried.

—Elimination or reduction of tidal delays.

—Improvement in navigation vessel safety and reduction in possibility of collisions or groundings.

As the local cooperating agency for the channel improvements, the Port of Oakland is fully committed to meet its financial obligations as required under the Water Resources Act of 1986, with the balance of the project cost to be funded from federal appropriations.

The Corps of Engineers is also proceeding with further study and selection of sites for disposal of dredged material from the final phases of construction of the project. Implementation plans are being developed in conjunction with relevant environmental groups. The current schedule calls for the Oakland Channel Deepening Project as described in its authorization to commence in September 1994, and be completed in 1995.

With regard to the future study and disposal site selection investigation, the San Francisco Bay Long Term Management Strategy (LTMS), the C–MANC recommendation includes an appropriation of $896,000 to continue the study, and I respectfully request your support of this recommendation.

The appropriations under consideration today will permit the Corps of Engineers to complete necessary studies concerning the project. These studies will include investigations into a suitable disposal site, or sites, to receive approximately 5.5 million cubic yards of dredge material, and will also update other necessary Corps, engineering and economic studies, and environmental studies leading to preparation of a Supplemental EIS for the project, prior to the commencement of final phases of construction.

As I stated earlier, we appreciate the cooperation and support of this committee, and join C–MANC to urge your approval of the appropriation requests as submitted.

MOSS LANDING HARBOR AND ELK HORN SLOUGH, CALIFORNIA

STATEMENT OF LARRY STEFFEN, PORT DIRECTOR, MOSS LANDING, CA

Mr. LANGNER. Moss Landing Port District Director Larry Steffen.

Mr. STEFFEN. The heart of the new Monterey Bay National Marine Sanctuary, the Port of Moss Landing, is in trouble. Unknown to most visitors, a giant 1-mile deep submarine canyon extends from the entrance of Moss Landing Harbor and Elk Horn Slough out 25 miles into the Pacific.

The good news is that this incredible scientific and natural resource is now protected by Federal law. David Packard is doubling the size of the Monterey Bay Aquarium and building a new $11 million scientific marine facility at Moss Landing. Six California State universities are planning an $8 million graduate school of marine scientists at Moss Landing.

And now the bad news. Due to harsh winter storms this year and heavy wave action, sand transport has increased into the harbor entrance, passing through the damaged breakwater, which is now 4 feet below its designed height.

The large commercial fishing vessels and marine research vessels must now enter the harbor at high tide for fear of grounding at the harbor entrance.

Although a U.S. Army Corps of Engineers dredging is scheduled for April of this year, the faulty breakwater, until repaired, will continue to contribute to the shoaling problem and create a hazard to both small and large vessels out of Moss Landing Harbor.

Moss Landing Harbor desperately needs the $1 million in breakwater repairs listed in the U.S. Army Corps of Engineers 1994 budget. Also in the U.S. Army Corps budget is $400,000 to continue reconnaissance studies of shoreline erosion in Elk Horn Slough.

Due to shoreline erosion and flooding, the volume of tidal water in the 6-mile long Elk Horn Slough National Sanctuary has increased substantially, creating a new depth of 30 feet under the California Highway 1 bridge, and a 7-knot current which threatens small vessels with being overturned and swept out to sea in a matter of minutes.

In summary, the $1.4 million budget from the Army Corps is vital to the heart of the Monterey Bay National Sanctuary and the Port of Moss Landing. We need your support.

Thank you.

Mr. LANGNER. We have the cooperative projects manager of the city of Newport Beach, John Wolter.

NEWPORT BEACH, CA, HARBOR ENTRANCE JETTY

STATEMENT OF JOHN WOLTER, COOPERATIVE PROJECTS ENGINEER, CITY OF NEWPORT BEACH, CA

Mr. WOLTER. Mr. Chairman, Senator Feinstein, it is really my pleasure to be here representing the city of Newport Beach and Newport Harbor, the largest small-craft harbor in California.

We urge your support for continued funding for the Corps of Engineers project in the Santa Ana River, which is a major flood control project in our part of the country.

There are, additionally, three Corps projects that we are working on in Newport, together with Orange County and the Corps. And that is a proposed feasibility study for the upper Newport Bay, which would extend the navigational channel into the upper bay and do dredging that would help to protect marshlands, wetlands, and the navigation channels.

The harbor entrance jetties have had some damage in the last couple of storms this year and storms back in 1983. And there is a Corps project that recommends maintenance work. We are supporting that project request.

And a third continuing Corps project that has the county of Orange and the city of Newport Beach as local sponsors is a continuation of the coast of California study through Orange County. We urge you to support those projects.

Thank you for your consideration.

[The statement follows:]

STATEMENT OF JOHN WOLTER

Dear Mr. Chairman and members of the committee, the City of Newport Beach is in support of the California Marine Affairs and Navigation Conference (CMANC) proposal for the 1993 Federal budget, which proposes funding of several Corps of Engineers studies and projects which affect the city of Newport Beach. In particular the City requests your support for continued funding of the Santa Ana River Mainstem Project which enters the Pacific Ocean adjacent to the City.

The city also supports three other Corps of Engineers projects with funding recommended in the 1993 fiscal year. These are described below:

The Upper Newport Bay—Feasibility Study ($500,000).—The Corps' Los Angeles District has completed a reconnaissance report which determined Federal interest in the project and recommended preparation of a feasibility study. This study would provide planning and engineering necessary to extend the existing Federal channel into Upper Newport Bay, and to remove sediment from the Upper Bay to enhance and protect wetland areas, salt marsh and navigational channels. The County of Orange and the City of Newport Beach are to be the local sponsors providing 50/50 matching funds for the study.

Newport Harbor Entrance Jettys—initiate repairs ($1,000,000).—The Corps' Los Angeles District has completed a condition survey of the Harbor entrance jettys and recommends maintenance and rehabilitation of both the east and west jettys.

Coast of California storm and tidal wave study—Orange County Coastline ($250,000).—These funds are necessary to continue this cooperative study, which is being funded under a 50/50 cost sharing agreement with the local sponsors. The study will provide valuable coastal information and coordination; enabling more rational management and design of coastal facilities and sand nourishment programs by Federal, State and local agencies.

Thank you.

REORGANIZATION OF CORPS OF ENGINEERS

Mr. LANGNER. Senator Feinstein will note in my prepared testimony our concerns about the reorganization of the Corps of Engineers and the manner in which it was taken up and processed.

We also note that the effort that she spearheaded, the California delegation, that did result in postponement in deferment of these actions.

We are very appreciative of this, and we hope that this will be done in a more orderly and rational fashion. And we will produce a better product.

INTERNATIONAL EXPORTS FROM CALIFORNIA

It will publicize adverse impacts on California's economy, not only of defense measures, but the ups and downs of our economy, which have been in the past and during the Great Depression, which I remember—perhaps some others here do—we are pretty well insulated, by comparison, with the Nation.

Now, we are suffering more. The bright spot, of course, is California's international trade. As Senator Feinstein knows, being a leader of a port city, California had done remarkably well.

Our exports last year were 12 percent higher. And we are not only the No. 1 exporting State in the Nation, but we are exporting at a rate of twice the national average. This is a very bright spot.

The Ports of Los Angeles and Long Beach together, which really are one harbor, represent now the fourth largest container facility in the world. And, of course, they also represent the largest port complex in the United States.

We have the chief engineer of the Port of Long Beach and a twice chairman of C–MANC, Dan Allen.

PORT OF LONG BEACH NAVIGATION PROJECTS

STATEMENT OF DAN ALLEN, CHIEF HARBOR ENGINEER, PORT OF LONG BEACH, CA

Mr. ALLEN. Chairman, Senator Feinstein, I would like to introduce the vice president of our board of harbor commissioners, Alex Belhumarin. I believe he is standing in the back.

I have submitted a written statement for the record, and I would like to highlight two things if you do not mind. One is: We would like to continue the model—the maintenance of the hydraulic model we have in Vicksburg, MS, which is a model of both Long Beach and Los Angeles. And we support that activity with some personnel and equipment maintenance in the port that we pay for.

The second thing I would like to point out is thanks to your efforts, Senator Johnston, all of the rain last year caused a substantial amount of sediment that came down the Los Angeles River, which happens to dump out in the Long Beach Harbor.

And this year we would ask the Federal Government for Corps funding to maintain that channel, which they have done in the past. And we request $2 million for that effort.

Thank you very much.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF E.D. ALLEN

I am E.D. Allen, Chief Harbor Engineer for the Port of Long Beach, California. I have been authorized by the Board of Harbor Commissioners of the City of Long Beach to represent the Port of Long Beach in regard to appropriations for the Los Angeles and Long Beach Harbors Model Study.

The Water Resources Development Act of 1976, Section 123, authorized the Chief of Engineers to operate and maintain the Los Angeles-Long Beach Harbor Hydraulic Model at the U.S. Army Corps of Engineers Waterways Experiment Station in Vicksburg, Mississippi as part of the Los Angeles and Long Beach Harbors Model Study. This model encompasses both port complexes in San Pedro Bay. The hydraulic model, along with several numeric models, provides state-of-the-art methodology that can be used on the San Pedro Bay ports and on many other harbor complexes. In addition, the Port, as the local agency, is assisting in the Corps' effort to provide continuous wave-gauge data by providing necessary support personnel and equipment for the maintenance of the portions of the system located at the Port.

The Port of Long Beach has developed a long-range master plan, referred to as the 2020 Plan, which demonstrates the need for new navigation channels and additional landfill development. The Corps of Engineers' modeling efforts described above are essential to satisfy regulatory agency requirements and to plan and engineer the expansion of the port complex and associated navigation channels, as detailed in the Port's 2020 Plan.

In fiscal year 1993, $155,000 was appropriated for maintenance of the physical model of San Pedro Bay.

Funding in fiscal year 1994, in the amount of $525,000, would continue annual maintenance on the model, replace wave generators, and maintain existing wave gauges. Therefore, Congress is respectfully requested to appropriate $525,000 for fiscal year 1994 to perform the work.

The Port of Long Beach also concurs with and supports the recommendation of the California Marine Affairs and Navigation Conference and the City of Long Beach on federal funding for remedial maintenance dredging to remove accumulated flood-deposited silt in the mouth of the Los Angeles River. These silt deposits create serious restrictions and safety hazards to commercial and recreational boating activity in, and adjacent to, the Long Beach Harbor District, which have resulted in accidents and litigation.

In addition, the Port supports the City in recommending these silt deposits be removed on an annual basis as a scheduled item of work. It has been estimated by the Corps that the annual rate of siltation is approximately 200,000 cubic yards and is influenced by operational decisions at the Corps of Engineers' dams located at the headwaters of the river. It is imperative, for our current operations, that a long-range remedy be found for the Los Angeles River mouth, if navigational utility and effective flood control capability is to be maintained.

Currently, the existing depth of the estuary appears insufficient to effectively accommodate flood waters when released from the Sepulveda and Hansen dams, as demonstrated during the recent storms in the month of February, 1992. The velocity and volume of the river, through the portions historically dredged by the Corps, was such that the City of Long Beach experienced the loss of, or damage to, navigational buoys, marina mooring facilities, dredging equipment, and usage by various commercial and recreational vessels. The recent deposition of sediment resulted in extensive shoaling, further restricting navigational utility in this area.

It is estimated that up to 400,000 cubic yards of material has shoaled the river area. An appropriation of $2,000,000 for construction and design costs would fund this most essential remedial project for the immediate accommodation of navigation and flood control necessities. Congress is, therefore, respectfully requested to appropriate $2,000,000 for the accomplishment of this most critically needed work.

Attached hereto is Resolution No. HD–1650, adopted by the Board of Harbor Commissioners of the City of Long Beach on March 8, 1993, which contains data relating to the background of the Los Angeles and Long Beach Harbors Model Study, the Los Angeles River dredging, and other related navigation and economic matters. The resolution stresses the need for federal assistance in developing economic, technical and environmental background information essential to the design and permitting of Port facilities vital to regional and national interests.

We kindly ask that Congress continue its support of these projects in fiscal year 1994 by appropriating the requested funds.

Thank you for permitting me the privilege of this presentation.

RESOLUTION NO. HD-1650

A RESOLUTION OF THE BOARD OF HARBOR COMMISSIONERS OF THE CITY OF LONG BEACH, CALIFORNIA, REQUESTING THE CONGRESS OF THE UNITED STATES TO APPROPRIATE FUNDS TO CONTINUE THE LOS ANGELES AND LONG BEACH HARBORS MODEL STUDY, RELATING TO IMPROVEMENTS IN SAN PEDRO BAY AND CONDUCTED BY THE UNITED STATES ARMY CORPS OF ENGINEERS, AND FOR MAINTENANCE DREDGING AT THE MOUTH OF THE LOS ANGELES RIVER

WHEREAS, the Ports of Long Beach and Los Angeles in San Pedro Bay, California, are two of a limited number of sites on the West Coast of the United States which possess the potential for deep water port facilities as recommended in the West Coast Deep Water Port Facility Study conducted by the United States Army Corps of Engineers; and

WHEREAS, the Ports of Long Beach and Los Angeles have a record of both physical and fiscal growth to the extent that together the two are presently handling over 143 million metric revenue tons of cargo annually (fiscal year 1991), which cargo is valued at over 100 billion dollars; and

WHEREAS, the growth and activity of the Ports of Long Beach and Los Angeles have a significant regional and national economic effect; and

WHEREAS, in excess of 3.1 billion dollars in federal revenues were collected as United States Customs duties on foreign imports passing through the Ports of Long Beach and Los Angeles during the fiscal year ending September 30, 1991; and

WHEREAS, both Ports are now, and are increasingly becoming, hard-pressed to provide facilities to meet the needs of the shipping industry, and to that end are conducting extensive studies, in conjunction with federal studies, to determine navigational, transportation, and environmental requirements necessary to provide economic and adequate surge-free berthing and cargo handling facilities; and

WHEREAS, all existing land in the Port of Long Beach which can be developed for shipping operations has been utilized or is in the process of being developed and, in order to meet the needs of the following decade, the design, permitting and construction of new lands must continue; and

WHEREAS, continuation of the studies currently underway by the United States Army Corps of Engineers, consisting of the Los Angeles and Long Beach Harbors Model Study, including maintenance and operation of the San Pedro Bay Hydraulic Model at Vicksburg, Mississippi, as authorized by Section 123 of the Water Resources Development Act of 1976, is needed for use in the design and permitting processes for future landfills for port development; and

WHEREAS, the Los Angeles River is the largest of numerous flood-control channels constructed and maintained jointly by the Los Angeles County Flood Control District and the United States Army Corps of Engineers, and silt deposit from heavy storm runoff in recent years accumulating in the mouth of the Los Angeles River in the City of Long Beach constitutes a restriction and hazard to both commercial and recreational boating; and

WHEREAS, the Board of Harbor Commissioners of the City of Long Beach, as a properly constituted and financially responsible local agency, by its Resolution No. HD-890, adopted August 3, 1965, expressed its intent to enter into such agreements as may be reasonably required to further federal projects for the development and improvement of Long Beach and Los Angeles Harbors;

NOW, THEREFORE, the Board of Harbor Commissioners of the City of Long Beach resolves as follows:

Section 1. That the Congress of the United States be, and is hereby, respectfully requested to appropriate simultaneously the funds necessary for the Chief of Engineers, United States Army Corps of Engineers, to maintain the San Pedro Bay Hydraulic Model at the Waterways Experiment Station at Vicksburg, Mississippi, as part of the Los Angeles and Long Beach Harbors Model Study.

Sec. 2. That the Congress of the United States be, and is hereby, respectfully requested to appropriate simultaneously the funds necessary for the Chief of Engineers, United States Army Corps of Engineers, in conjunction with the Los Angeles County Flood Control District, to engage in the necessary maintenance dredging at the mouth of the Los Angeles River to remove silt deposits which have accumulated at that location.

Sec. 3. That the Executive Director of the Long Beach Harbor Department be, and he is hereby, directed to send copies of this resolution to the United States Senators and to Members of the House of Representatives from California, with a letter requesting their assistance in presenting this resolution before the proper Congressional committees.

Sec. 4. That the Executive Director of the Long Beach Harbor Department be, and he is hereby, further directed to send copies of this resolution to the President of the United States; the Director, Office of Management and Budget; the Secretary of the Army; the Chief of Engineers, the Division Engineer-South Pacific Division and the District Engineer-Los Angeles, all of the United States Army Corps of Engineers; and to such other interested persons as he may deem appropriate.

The Secretary of the Board shall certify to the passage of this resolution by the Board of Harbor Commissioners of the City of Long Beach, shall cause the same to be posted in three (3) conspicuous places in the City of Long Beach, and shall cause a certified copy of this resolution to be filed forthwith with the City Clerk of the City of Long Beach and it shall thereupon take effect.

I hereby certify that the foregoing resolution was adopted by the Board of Harbor Commissioners of the City of Long Beach at its meeting of March 8, 1993, by the following vote:

Ayes:	Commissioners	Hearrean,Bellehumeur, Hauser
Noes:	Commissioners	None
Absent:	Commissioners	Friedland,Perez
Not Voting:	Commissioners	None

Acting Secretary

SANTA CRUZ HABOR, CA, JETTY IMPROVEMENT

STATEMENT OF BRIAN E. FOSS, PORT DIRECTOR, SANTA CRUZ PORT DISTRICT, CA

Mr. LANGNER. We have Brian Foss, the current chairman of C–MANC from the Santa Cruz Port District.

Mr. FOSS. Thank you, Chairman Johnston and Senator Feinstein.

With me today is Jack Meehan, who is a commissioner with the Santa Cruz Port District.

As part of our testimony, first of all, I would like to thank you for your past support. In 1986, this committee supported a joint venture which bought Santa Cruz Harbor, jointly, a dredging system.

That system has worked for 7 years. It worked very well at no cost to the Federal Government. So these investments do pay off back here.

I am here today to support Corps of Engineers funding of $200,000 to repair the west jetty of Santa Cruz Harbor. This project will place a permanent cap on the jetty. The improvement will have the twin benefits of repairing a serious, ongoing maintenance problem that the Corps has had, and providing a safe accessway, coastal accessway, for the public.

Hundreds of thousands of people are coming to Monterey Bay to visit the newly inaugurated Monterey Bay National Marine Sanctuary. And the west jetty is one of the few access points that you can really get out into it. We would certainly appreciate your support on that.

Thank you.

[The statement follows:]

STATEMENT OF BRIAN E. FOSS

The Santa Cruz Harbor jetty system was constructed in 1963 by the U.S. Army Corps of Engineers. A sand bypass system was added in 1986 as a joint venture between Santa Cruz Port District and the Corps of Engineers. The total system serves a 1,200 boat harbor and is a testimony to the benefits of local federal cost share projects.

One of the indirect benefits of the jetty system has been to provide hundreds of thousands of visitor day opportunities. The beaches adjacent to the harbor are highly used. The west jetty itself has become a significant coastal access walkway extending 1,200 feet seaward into Monterey Bay which has recently been designated as a National Sanctuary.

The cap on the west jetty is, however, quite substandard. It is sand and dirt on a porous jetty. It develops numerous holes and craters in the wintertime, creating hazards for visitors. This condition causes maintenance and liability problems for the Corps. Injury lawsuits have been filed over the years due to the condition of the cap.

The appropriation request will solve the maintenance and liability problems and will enhance a regional asset which allows access to the Monterey Bay National Marine Sanctuary.

SANTA BARBARA, CA, ENTRANCE CHANNEL

STATEMENT OF HON. SHEILA LODGE, MAYOR, CITY OF SANTA BARBARA, CA

Mr. LANGNER. The city of Santa Barbara, Mayor Sheila Lodge.

Ms. LODGE. Hello, Mr. Chairman and Senator Feinstein, a former colleague.

I urge your continued support for funding for $400,000 for the design of Santa Barbara's harbor entrance and channel dredge to keep our harbor of refuge, a home of the Coast Guard and a large commercial fishing fleet, open.

Ultimately, with a federally procured dredge, the city will take over O&M and reduce Federal participation by hundreds of thousands of dollars per year.

I also urge your support for the necessary dredging; $1 million O&M is needed to maintain the harbor until we have a dredge of our own.

Thank you very much.

Senator JOHNSTON. Thank you, Mayor.

[The statement follows:]

STATEMENT OF SHEILA LODGE

Mr. Chairman and members, I am Sheila Lodge, Mayor of the City of Santa Barbara, California. I thank this distinguished subcommittee and its staff and the support it has given in the last several years to maintaining our world famous harbor, and, more importantly, its navigation for Coast Guard and other public purposes, federal research and commercial purposes.

Mr. Chairman, CMANC is recommending fiscal year 1994 appropriation of $400,000 to continue design of a harbor entrance and channel dredge to be procured by the Secretary with the agreement that the City operate the dredge at no federal cost to execute the federal O&M Mission at Santa Barbara harbor. The dredge would not enable any construction mission and would facilitate maintenance only, and, therefore, should be 100 percent federally financed.

However, the City's assumption of the Corp of Engineers' O&M Mission at Santa Barbara represents significant annual savings to the United States, probably several hundred thousand dollars per year.

This could be a milestone in true navigation cost sharing, Mr. Chairman, and provide a not insignificant contribution to cutting the federal deficit.

CMANC has also recommended $1 million in fiscal 1994 to continue O&M operations and to protect the federal channel from West Beach encroachment of material until a federally procured and a city-operated dredge can be made operational.

The City is pleased to support the CMANC recommendation to this Committee and I thank the Committee for the opportunity to testify today.

RANCHO PALOS VERDES, CA, SHORELINE PROTECTION PROJECT

STATEMENT OF JOHN McTAGGART, COUNCILMAN, CITY OF RANCHO PALOS VERDES, CA

Mr. LANGNER. We next have John McTaggart, councilman of the city of Rancho Palos Verdes.

Mr. MCTAGGART. Thank you, Mr. Chairman, Senator Feinstein. I am back here again for about the seventh year, I think. We have been working on this project, it seems, forever. I have submitted written testimony. So, I will just expand a little bit on it.

The opportunity for mitigation is limited in California, and we offer mitigation to the ports to allow that major expansion with our shoreline erosion project.

When you get down to the bottom of my written testimony, we mention $100,000. That is a small amount of money, relative to the whole budget of the country, but we are a low, no-tax city and a contract city, one of the most efficient forms of government in California.

And as a result, we get 3 percent of the total property tax. Being a bedroom community, we do not get much of anything else. So, it is very important to us, and that $100,000 means a lot.

Thank you very much.

[The statement follows:]

STATEMENT OF JOHN MCTAGGART

Mr. Chairman and members of the subcommittee, Rancho Palos Verdes, California thanks this distinguished Subcommittee for its past support. Again, the City asks that the Subcommittee fund its shoreline protection project to enable the Corps of Engineers to continue its mission to protect public and private property from shoreline erosion.

If executed, this project can provide environmental mitigation for expansion of the Seaports of Los Angeles and Long Beach needed to go forward with their economic benefits to the U.S. economy and the U.S. Treasury. Again, Mr. Chairman, the resulting mitigation opportunity will enable the largest seaport development project in the Country.

The Corps' shoreline protection mission must be executed to protect the now arrested uplands landslide which is a non-federal problem, but is the largest urban landslide in the U.S.

Mr. Chairman, the state and local governments have now executed $8 million to stabilize properties in their jurisdiction. We ask only that Corps funding be continued in the amount of $100,000 to execute studies of shoreline protection in the federal jurisdiction.

SACRAMENTO RIVER DEEP-WATER SHIP CHANNEL

STATEMENT OF TOM SCHEELER, ASSISTANT DIRECTOR OF ENGINEERING, SACRAMENTO-YOLO PORT DISTRICT

Mr. LANGNER. The Port of Sacramento's assistant director of engineering, Tom Scheeler.

Mr. SCHEELER. Mr. Chairman, Senator Feinstein, the district is a local sponsor of the Sacramento River deep-water ship channel navigation project.

The first two of six phases have been completed on this deepening project. Litigation will begin shortly to favorably resolve the issue of financial responsibility for utility crossing relocations that have delayed phase III.

The Port of Sacramento has also undertaken the creation of an assessment district to further confirm and solidify our commitment of successful completion of this important project.

On behalf of the Port of Sacramento, I convey our appreciation for your past commitment to this project and request that you support funding in the amount of $100,000 to allow continuation of Corps of Engineers coordinating efforts.

Thank you.

[The statement follows:]

Statement of Thomas Scheeler

Mr. Chairman and members of the subcommittee, my name is Thomas Scheeler, assistant director of engineering for the Sacramento-Yolo Port District. The district is the local sponsor of the Sacramento River deep water ship channel navigation project.

The first two of six phases have been completed on this project and litigation will begin shortly to favorably resolve the issue of financial responsibility for utility crossing relocations that has delayed phase 3. The Port of Sacramento has also undertaken the creation of an assessment district to further confirm and solidify our commitment of successful completion of this important project. The Port of Sacramento will soon request the Corps of Engineers to restart this project and intends to return before you next year requesting an appropriation for resumption of dredging in fiscal year 95.

On behalf of the Port of Sacramento, I convey our appreciation for your past commitment to this project and request you support funding in the amount of $100,000 to allow continuation of Corps of Engineers coordinating efforts.

Marina Del Rey, CA, Harbor Projects

STATEMENT OF STAN WISNIEWSKI, DEPUTY DIRECTOR, LOS ANGELES COUNTY DEPARTMENT OF BEACHES AND HARBORS

Mr. Langner. Now, from an area which includes the largest manmade marina in the world, the Los Angeles Department of Beaches and Harbors, we have Deputy Director Stan Wisniewski.

Mr. Wisniewski. Thank you, Mr. Chairman and Senator Feinstein. It is really a privilege to be here. I have also provided written testimony and I will keep my remarks brief.

The Los Angeles County Department of Beaches and Harbors manages over 31 miles of recreational beaches, serving some 60 million visitors annually, clearly making our coastline one of the most heavily used in developed recreational resources in the Nation.

Our beaches also serve, in addition to their recreational use, as natural barriers protecting billions of dollars in public and private property.

The shoreline facilities that are public include parking lots, restaurants, and accessways that are used by literally tens of millions of visitors that come to the beach every year. They all require protection from the storms that we have.

In addition, the large recreational boating community in Marina Del Rey needs to have safe and clear access to the harbor.

I am here to urge your support in funding $250,000 for the Malibu coastal area shoreline protection study, $2,105,000 for Marina Del Rey Harbor dredging, and $275,000 for Marina Del Rey Harbor navigation study.

The implementation of these projects will protect the $1 million investment that we have in public and private shoreline facilities, as well as minimize the risk of boating accidents in Marina Del Rey.

Los Angeles County is prepared to provide local financial participation in the future for projects that are identified by the Malibu coastal area shoreline protection study, as well as projects that are identified by the Marina Del Rey navigation study.

Thanks for this opportunity.

[The statement follows:]

STATEMENT OF STAN WISNIEWSKI

The Los Angeles County Board of Supervisors respectfully requests the Congress of the United States include funds in the fiscal year 1994 Budget for the following three projects urgently required to preserve, restore and maintain vital and precious assets, the 75 mile shoreline of Los Angeles county and the recreational boating harbor at Marina del Rey.

Malibu Coastal Area Shoreline Protection Study ($250,000).—The winter storms in 1983, 1988 and 1991 caused extensive damage to the Los Angeles County coast. In 1982–83 and 1988 the El Nino phenomena directly hit the Los Angeles County coast with unusually high tides and caused widespread damage to beaches and shoreline facilities estimated at over $20 million. While much of the sand has returned to the County's beaches and they appear to be significantly restored, the beaches remain extremely vulnerable to future storms. Healthy beaches are necessary, natural buffers to protect public facilities from the unpredictable forces of the ocean.

Funding of $250,000 is needed to complete the reconnaissance phase of this feasibility study to determine the most effective methods of shoreline protection at those points within Santa Monica Bay that are most vulnerable to future storm attack. Los Angeles County is prepared to provide local financial participation in the future for projects identified by this study. Because Los Angeles County has one of the most heavily urbanized and developed shorelines in the country, it is extremely important to fund and complete this study to help prevent future damage to significant public investments in shoreline facilities.

Marina del Rey Entrance Channel Dredging ($20,105,000).—Marina del Rey provides nearly 6,000 berths for recreational boating. It is the largest man-made small craft harbor in the world, providing refuge for transient, as well as local boaters from the greater Los Angeles area. Especially on weekends and holidays, the harbor experiences significant boat traffic in the entrance channel, which is subject to shoaling from the normal regime of sand transport along the coastline and from Ballona Creek.

The U.S. Army Corps of Engineers is responsible for maintenance dredging of the Marina del Rey entrance channel pursuant to a perpetual right of way easement. This is to occur approximately every four years. The last dredging took place in 1987. However, only a small amount of the harbor sediments scheduled for removal were actually dredged at that time.

In Federal fiscal year 1993, funding of $1.4 million was available for dredging. However, environmental concerns prevented the full dredging and reduced the project scope to maintenance dragging of 17,000 cubic yards of shoaled material at the Marina's Entrance. Following storms this winter, restrictions to the entrance are rapidly growing worse and are threatening to impact boating safety and the ability of the U.S. Coast Guard, County Sheriff, Fire Department and lifeguards to respond to emergencies. As these agencies form the critical core of the LAX Air-Sea Disaster Response Team, it is imperative that the Marina's entrance channel remain open and safely navigable.

Marina del Rey Harbor Navigation Study ($275,000).—Shoaling of the Marina's navigation channel from sediment from Ballona Creek and other sources is causing frequent navigation problems. Additionally, contaminants in the Ballona Creek sediment are causing problems in disposing of the dredged material. Modifications to the existing Federal Project, including relocation of the Ballona Creek Flood Control Outlet or a containment area for disposal of contaminated material, and other alternatives would be investigated in this proposed reconnaissance study as a means to resolve these problems.

The County is aware of the cost-sharing requirements for Corps' Feasibility Studies, and is able and willing to cost share subject to review of the Reconnaissance Study results and consideration of County Budget priorities at that time.

Every year there are growing demands and shrinking resources, making the allocation of these resources a difficult task. I trust your committee will recognize the high priority associated with the projects discussed in this letter to protect major public and private shoreline facilities and developments.

OCEANSIDE HARBOR, CA, SAND BYPASS SYSTEM

STATEMENT OF DICK LYON, MAYOR, CITY OF OCEANSIDE, CA

Mr. LANGNER. Mayor Dick Lyon, the city of Oceanside.

Mr. LYON. Mr. Chairman, Senator Feinstein, it is a pleasure to appear before you.

I am the long-term mayor of Oceanside, now almost 4 months completed. I was interested to hear Senator Feinstein's comments with regard to decrepit and outmoded technology.

The topic that I want to address is the Oceanside experimental sand bypass. I am seeking funding for the city of Oceanside, $4 million for phase III of that project; in addition, Oceanside shoreline protection in the amount of $200,000.

I would like to just read one item out of the testimony, which indicates that phase III of the Oceanside experimental sand bypass system has proven successful to date.

The projected economic comparison provided in this report, which is the evaluation by the Corps of Engineers, indicates that continued development of the system through completion of phase III establish a potential cost savings in maintaining the harbor channel with bypassing technology, are far in excess of the standard dredging procedures, in addition to which they are environmentally on the positive side, and provide for the beaches at Oceanside, which is Oceanside's No. 1 asset, a real plus as far as our beach is concerned.

I urge that you look carefully at this, because the evaluation from the Corps of Engineers, which I placed in Mr. Gwaltney's hands yesterday, unfortunately has not made its way to Washington.

The summary, which is contained in pages 64, 65, and 66, is extremely important, because it shows it is cost efficient; it is environmentally sound.

Thank you very much.

Senator JOHNSTON. Thank you, Mayor.

[The statement follows:]

STATEMENT OF DICK LYON

OCEANSIDE EXPERIMENTAL SAND BYPASS

The City of Oceanside respectfully requests that your Committee appropriate $4 million in the fiscal year 1994 budget to build and operate Phase III of the Oceanside Experimental Sand Bypass System. Last year, the conference report for the fiscal year 1993 Energy and Water Development Appropriations Bill directed that the Corps of Engineers continue the development of the Oceanside Sand Bypass System through the completion of Phase III to demonstrate the ability of the system to reduce channel maintenance costs. Despite the release of an evaluation report of the Sand Bypass System by the Los Angeles District Corps of Engineers which recommended completion of Phase III and found that the system, as designed was more cost effective than conventional dredging, the Corps of Engineers has not, regrettably, proceeded with construction of Phase III of the project

The Corps of Engineers report has found that the Phase III Sand Bypass System will capture and bypass the overwhelming majority of the sand which enters the entrance channel at Oceanside Harbor. The fully amortized cost per yard for material to be bypassed through the Phase III Sand Bypass System has been estimated in the Corps of Engineers report to be $3.88. In comparison, the cost per cubic yard for conventional dredging has averaged $4.97 over the last 10 years, with the most recent dredging having cost $6.06 per cubic yard. Clearly the Sand Bypass option represents a substantial savings.

The Sand Bypass System has an additional advantage over conventional dredging, in that the continuous bypassing in small increments is more effective at stabilizing the downdrift beach than conventional dredging, which places large amounts of sand at one time and is subject to accelerated erosion. This added beach stabilization, which both reduces property damage and increases recreation, is a fringe benefit on which it is difficult to place a dollar amount and has not been taken into account in the Corps of Engineers' analysis of this project.

As the Federal government begins to address the pressing needs of reducing both expenditures and the deficit, it is recognized that you will give full consideration to new technologies that will reduce Federal costs in the long run. The Oceanside Sand Bypass System has demonstrated such a cost effective technology in a very challenging harbor environment

The City of Oceanside appreciates the support which this committee has given to the Oceanside Sand Bypass System in the past. We ask your continuing commitment in demonstrating this cost effective technology not only for the enhancement of our city, but also so that it may be applied at countless other harbors throughout the nation.

OCEANSIDE SHORELINE PROTECTION STUDY

In fiscal year 1993, the Committee appropriated $100,000 to initiate the reconnaissance phase of a Shoreline Protection Project in Oceanside, California. The City of Oceanside is now requesting that you approve an appropriation of $200,000 to complete that study.

Oceanside's shorefront has been eroding since the Federal government constructed the Camp Pendleton Harbor as an emergency wartime measure in 1942. Congress has repeatedly affirmed the Federal governments responsibility for having caused the erosion and for providing a solution.

The pursuit of a shoreline protection program in Oceanside is particularly timely now that the Corps of Engineers has completed its Coast of California Study for the San Diego region. The information gathered in the Coast of California Study will help the Corps to assess potential solutions that will meet property protection needs and at the same time be environmentally sound and consistent with regionally oriented shoreline solutions. Furthermore, cost efficiencies can be achieved by conducting this study concurrent with the Shoreline Protection Study now undertaken in the City of Carlsbad, our immediate downcoast neighbor.

This project enjoys strong support in both Oceanside and the region as a whole. We urge your Committee's continuing approval of funding for this important project.

OCEANSIDE HARBOR STORM REDUCTION AND NAVIGATION IMPROVEMENTS

The City of Oceanside and the Harbor District welcome this opportunity to thank the Committee for your support of the vital Oceanside Harbor Storm Reduction and Navigation Improvements Project. Funding was approved for the project in the fiscal year 1993 budget. Construction is slated to commence on the project in April 1993 and be completed in October 1993.

These much needed improvements continue to be critical in averting further damage to our inner harbor facilities and vessels moored there. Over the last fourteen (14) years we have expended in excess of $9 million to repair damages. The shoaling at the harbor entrance continues to be a navigational hazard which has resulted in more than 142 boating accidents, 13 deaths and 56 serious injuries.

As the local sponsor, we have demonstrated our ability and stand ready to meet our cost obligations.

Your support of this project is greatly appreciated.

CONCLUSIONS AND RECOMMENDATIONS: PHASE III COMPLETION

Summary.

The Experimental Sand Bypass System has proven succesfull to date. The success of Phases I and II has demonstrated the functional use of jetpump and fluidizer technology in bypassing sand in a coastal harbor environment. The projected economic comparison provided in this report ($3.89/cy vs. $4.97; Scenario 2; Table 14) justifies the continued development of the system through completion of Phase III and establishing the potential cost savings in maintaining the harbor channel with bypassing technology.

Completion of the system provides other benefits as well. The lessons learned by operation of a sand bypass experiment in a coastal harbor environment provides a basis to evaluate the potential use of bypassing technology in similar environments. The Generic Case cost comparison (see pages 54-59) provides a scenario of potential costs and benefits of implementing a bypassing system based on the design of Oceanside's system. Although bypassing designs are not standard, this information information is useful since no other place in the world is testing jetpump and fluidizer technology in a coastal harbor environment. Consequently, considerable interest in the system's results to date have been generated from the coastal engineering community as well as local government agencies in Florida and California. Furthermore, the Governments of Holland and Spain have also requested information and site visits to the project. This outside interest based on possibly implementing bypassing technology by using the technological lessons learned from the Oceanside system.

Finally, and most importantly, completing Phase III and the final evaluation of the system's effectiveness to reliably capture sand shoaling patterns is the only alternative to recommend in order to fulfill the intent of the project's authorizing language which directs the Corps to: "evaluate the effectiveness of a sand bypass system as a means of maintenance of the harbor channel" (House Report No. 97-177). The plan to complete the system recommends that a final project report will be prepared to evaluate the completed Phase III system's performance in relation to the authorizing language. Pending available funding to proceed with Phase III, the City of Oceanside will be informed of the project's completion schedule and expectations of future operation based on the system's final evaluation.

Description.

The Phase III design is shown conceptually in Figure III-1. The design consists of a jet pump and fluidizer system located in the Oceanside Harbor Entrance Channel at both the South Jetty and North Breakwater. The Phase II system would remain in place with the addition of two sand trap fluidizers. Each jet pump would be supplied from two sand trap fluidizers. The additional sand trap fluidizers are positioned to increase the capture area, thus capturing the material shoaling the entrance channel from the south as indicated in Figure III-2. Also, the additional fluidizers will increase the average production rate to 200 CY/Hour.

A jet pump with a 6 inch diameter intake would be located at the North Breakwater and will be supplied from two sand trap fluidizers. This jet pump and fluidizer system will have the capability to pump 200 CY/Hour, and will capture the material shoaling the entrance channel from the north.

The Phase III system will be designed so that material will be pumped either from the South Jetty System or the North Breakwater System. As shown in Table 3, the operation hours for this Phase III system is 1,700 hours. This is based on operating the South Jetty System for 1,133 hours to obtain a total of 200,000 CY/Year and operating the North Breakwater System for 567 hours to obtain a total of 100,000 CY/Year. The Phase III system has the capability of removing 300,000 CY/Year from the entrance channel. The operation schedule can be modified to accommodate the fluctuating shoaling conditions throughout the year. The system will require an operation/ maintenance staff of three people for continuous operation.

The basic pumping system and equipment remain the same with the exception of the fluidizer supply pump, so the maintenance hours are estimated at the current annual cost. The jet pump retrieval cost and the dive support days increase due to the addition of the North Breakwater jet pump.

The Phase III system also consists of eliminating the barge and constructing a platform in the same vicinity. Therefore, the barge rent is eliminated from the operation cost. The Oceanside Harbor Improvement Project has designed a spur groin off the South Jetty which will provide sheltering for the platform. With the spur groin there would be no requirement to raise the platform to storm position, so the associated cost is deleted.

The Phase III estimated annual operation cost is less than the Phase II estimated annual operation cost. The cost per cubic yard for the Phase III system would be considerably less than the Phase II system and Maintenance Dredging. The cost to construct Phase III is estimated at approximately $3,539,300 (Table 6).

Future Schedule.

Fiscal year 1993 funds will be used to continue operation of Phase II. However, these funds will not be sufficient to continue operation throughout the year nor intiate design of Phase III. The Los Angeles District will attempt to obtain additional funding to accomplish the following schedule:

FY1993: (Oct 92 - Sept 93): $ 1,300,000
- Continue Operation of Phase II system.
- Initiate and complete final design for Phase III.

FY1994: (Oct 93 - Sept 94): $ 4,000,000
- Initiate and Complete Construction for Phase III.
- Operate Phase III.

FY1995: (Oct 94 - Sept 95): $ 700,000
- Complete Operation of Phase III.
- Complete Project / transfer operation to local interests.

Funding estimates include construction, E&D support and design, operation costs, project management support, and Supervision and Administration costs. Based on available funding the project is scheduled for completion in FY1995. The total project costs based on experimental costs to date and project costs through FY 1995 are estimated to be approximately $23,000,000.

PORT HUENEME, CA, HARBOR IMPROVEMENTS

STATEMENT OF ED MILLAN, PRESIDENT, BOARD OF HARBOR COMMISSIONERS, OXNARD HARBOR DISTRICT, CA

ACCOMPANIED BY:

STANLEY DAILY, COMMISSIONER, OXNARD HARBOR DISTRICT

RAYMOND FOSSE, COMMISSIONER, OXNARD HARBOR DISTRICT

JESS RAMIREZ, COMMISSIONER, OXNARD HARBOR DISTRICT

ANTHONY TAORMINA, COMMISSIONER, OXNARD HARBOR DISTRICT

Mr. LANGNER. Oxnard Harbor District, which operates Port Hueneme, is represented by its president of commission, and past chairman of C–MANC, Ed Millan.

Mr. MILLAN. Thank you. Good afternoon, Mr. Chairman, Senator Feinstein.

We are pleased to have this opportunity to appear before you today to ask for your support to finish the reconnaissance study and to initiate a feasibility study for improvement at the Port of Hueneme.

The Port of Hueneme is the only deep-water port between Los Angeles and San Francisco. It is located in the city of Port Hueneme and serves as a gateway port to central California.

The deepening and widening of the ship channel and turning basin at the port is an important component of the district's future capital improvement plan.

These improvements will further improve the port to better serve the increased demand on marine facilities in southern California and to meet the challenges of a changing shipping industry.

In closing, I would like to emphasize the joint nature of the Port of Hueneme. The U.S. Navy and the Oxnard Harbor District are working cooperatively to ensure that overall harbor improvements will have benefits to both the military mission of the port and the commercial ventures of the Oxnard Harbor District.

Thank you for your attention and favorable consideration of our request. We also have submitted written testimony.

Thank you.

Mr. LANGNER. Accompanying Mr. Millan are Commissioners Stanley Daily, Raymond Fosse, Jess Ramirez, and Port Executive Director Tony Taormina, whom I am sure Mayor Feinstein recalls from the Port of San Francisco.

[The statement follows:]

STATEMENT OF EDWARD J. MILLAN

Mr. Chairman and members of the subcommittee, I am Commissioner Edward J. Millan, President, Board of Harbor Commissioners, Oxnard Harbor District, Port Hueneme, California. I am joined today by Commissioner Raymond Fosse, Vice President, Commissioner Stan Daily, Secretary, and Harbor Commissioner, Jesse Ramirez.

We are pleased to have this opportunity to appear before you today to ask for your support to finish the reconnaissance study and initiate a feasibility study for the improvements at the Port of Hueneme. The deepening and widening of the ship channel and turning basin at the Port is an important component of the District's future capital improvement plan. These improvements will further improve the Port to better serve the increased demand on marine facilities in Southern California and to meet the challenges of a changing shipping industry.

The Port of Hueneme is the oniy deep water port between Los Angeles and San Francisco. It is located in the City of Port Hueneme and serves as the Gateway Port to Central California.

The Oxnard Harbor District was established in 1937, by a vote of the people, pursuant to the California Harbors and Navigation Code. For over fifty-five years the Port has served a dual commercial and military mission. The commercial seaport, owned and administered by the Board of Harbor Commissioners, consists of over 80 acres, five deepwater berths (35 feet MLLW), and backland support facilities to serve the shipping industry. The Port is also the home of the Marine Spill Response Corporations' Southwest Regional Center. This Center is one of five to be established in the United States to respond to oil spills of national significance.

The Port's main import commodities consist of automobiles from Europe and Japan, fruit from Central and Latin America, woodpulp from Brazil and frozen meat from Australia. As California's gateway to Ventura County, the Port of Hueneme is a major export port for California/Arizona Citrus to Japan.

The Port of Hueneme currently contributes over $200 million in benefits to Ventura County, and the Port is directly and indirectly responsible for over 2,000 jobs.

Over the past two years, the Oxnard Harbor District has recorded a number of successes which we believe are indicators of the District's potential for future growth. A little more than a year ago, the Port of Hueneme was designated a "Port of Entry" by the U.S. Customs Service. Last spring, the Harbor District signed two significant long term agreements with European shipping companies to become the primary port for their vessels. In July, the Marine Spill Response Corporation, a non profit corporation responsible for major oil spill cleanup, opened their facilities in our community.

Later this year, the Oxnard Harbor District looks forward to the opening of the West Coast's largest dockside refrigerated facilities. This $10 million, state-of-the-art, refrigerated facility was specifically designed to accommodate over ten million cartons of citrus annually to the Far East from the Sunkist Growers of Calilornia and Arizona.

In 1991, the Harbor District provided detailed information in its Port of Entry application regarding the future deepdraft cargo vessel activities at the Port. At that time, the Port anticipated increases in vessel calls to nearly 350 calls per year by 1994–95. With the completion of the new refrigerated terminal this year, in 1994 the Port will add Cool Carriers (USA) Inc. to their list of customers. Cool Carriers is one of the largest refrigerated shipping lines in the world, and this one customer will account for nearly 100 new vessel calls per at the Port of Hueneme.

To continue our growth into the future, the Port must meet the challenges of the shipping industry. That is why we are here today, requesting a fiscal year 1994 energy and water appropriation of $350,000 to complete the U.S. Army Corps of Engineers reconnaissance study initiated this year.

In closing, I would like to emphasize the joint nature of the Port of Hueneme. The U.S. Navy and the Oxnard Harbor District are working cooperatively to insure that overall harbor improvements will have benefits to both the military mission of the Port and the commercial ventures of the Oxnard Harbor District. The Port has developed a good working relationship with the Commanding Officer of the Construction Battalion Center, and with his support and effort, the reconnaissance study and feasibility study will identify improvements that will benefit our Nation's deployment capabilities.

Thank you for your attention and consideration of the Oxnard Harbor District's request. If you have any questions about the study or the Harbor District, we will be happy to try and answer them.

CONCLUDING REMARKS

Mr. LANGNER. To conclude, I would like to take the opportunity to present my successor as president of C–MANC, who takes office as of July 1.

Would Elizabeth Krauth please stand? Is she here? There she is. She is already standing.

She takes over midyear. And I think that she will join with me as time goes on, in my experience over three-plus decades—to appreciate the warmth and sincerity and the goodwill that this committee and your predecessors have always accorded us and water commission witnesses.

It has been a pleasure to appear here. One thing about coming back to Washington that I will miss in the future is to be associated with such a wonderful organization as these congressional committees and their staffs.

Thank you very much.

Senator JOHNSTON. Well, thank you, Mr. Langner. I have not been here 34 years, but I have been on this committee for 18 years. And I know each of those 18 years you have come before the committee you have done a terrific job for California and for the cause of navigation, marine and related projects which you have worked on so hard and so faithfully all that time.

I can say we are really going to miss you. I hope you will come back frequently. Those of you in the audience who have not seen Bob Langner perform will know that this is what he does best. And he has done, as you can tell by having watched him today, an excellent job.

I will say that the looks of the chairmanship are going up, even if the experience level is going down. [Laughter.]

So, we are grateful for that. And we look forward to that, Bob. And we hope you will come back in the future. You have done a wonderful job for this committee.

Mr. LANGNER. You have been most generous, indeed. I did not bother to introduce our witnesses who were listed on our attendance list. I am sure they will be included in the record, but we have a number of other constituents here as well.

Thank you very much.

Senator JOHNSTON. Thank you.

CALIFORNIA WATER RESOURCE PROJECTS

STATEMENT OF CLAIR A. HILL, CHAIRMAN, FEDERAL APPROPRIATIONS COMMITTEE, CALIFORNIA WATER COMMISSION

Senator JOHNSTON. Now, we have Mr. Clair Hill, chairman of the Federal Appropriations Committee of the California Water Commission.

Mr. HILL. Thank you very much, Mr. Chairman.

We are very happy to have a Californian on this committee, Senator Feinstein. And I very much appreciate you commenting on the Coleman Fish Hatchery, the Shasta Dam temperature control, as well as the other fishery problem on the river there.

COLEMAN FISH HATCHERY

I would like to comment that this is the first year that the Coleman Fish Hatchery funding has been before this committee. Previously, it was the responsibility of the Interior Subcommittee. This year, it was transferred over to this subcommittee, which makes it a little easier as far as we are concerned.

In the interests of time, I would just go ahead with our list as Mr. Raymond Barsch, General Manager of the State Reclamation board.

[The statement follows:]

STATEMENT OF CLAIR A. HILL

Mr. Chairman and Members of the Committee, I am Clair Hill, Chairman, Commissions Federal Appropriations Committee. The California Water Commission is an official agency of the State of California. It is composed of nine representative citizens from throughout the State. The Commission is charged by statute with representing state and local interests before this Committee. We have coordinated our presentation with the presentations by local agency representatives. On behalf of the California Water Commission, I would like to express our sincere appreciation of the support this Committee has given California water, fishery and flood control appropriations over the years. I am privileged to appear before you with the official recommendations of the State of California for fiscal year 1993–94 appropriations.

The Commission supports funding for all projects of the US Army Corps of Engineers, U.S. Bureau of Reclamation and US Fish and Wildlife Service. The Commission understands that the numerical amounts in the President's budget will not be known until April 5, 1993. The Commission supports continued funding of the projects listed in amounts adequate for their timely implementation. In the absence of better information, the dollar amounts for some of the projects are taken directly from the FY 1993 allocation. The Commissions recommendations are shown on the attached document entitled, "California Water Commission—Federal Water, Flood Control and Fishery Programs in California for Fiscal Year 1993–94. March 12, 1993." These recommendations were adopted on March 5, 1993.

COMMENTS ON RECOMMENDATIONS

In our recommendations to the Congress for fiscal year 1993 appropriations, we identified projects which needed additional funding. Some of these projects together with new projects are shown in the table below. Brief comments on these projects follow the table.

CWC No.	Project and county	CWC final recommendations, fiscal year 1994
	U.S. Army Corps of Engineers:	
	General investigations—Surveys:	
3	Calleguas Creek (Ventura)	$130,000
11-8	San Joaquin River mainstem	600,000
14A	Santa Ana River-Norco Bluffs (Riverside)	150,000
	Preconstruction engineering and design:	
33	San Joaquin River Basin, Tule River, Success Reservoir (Tulare)	100,000
36	Coyote and Berryessa Creeks (Santa Clara)	4,000,000
	Construction—General:	
40	Sacramento River, Glenn-Colusa Irrigation District (Riffle Restoration (Glenn)).	400,000
44	New Melones Lake (Calaveras and Tuolumne)	1,300,000
54	Sacramento urban levee reconstruction project (Sacramento)	6,000,000
	U.S. Bureau of Reclamation:	
60	Auburn-Folsom South Unit	1,850,000
61	Temperature control device at Shasta Dam	13,000,000
67	San Luis Unit (includes funds for Arroyo Pasajero flood control project)	4,400,000
	Special investigations (mid-Pacific region):	
76	Off-stream storage	10,000
77	San Joaquin Valley conveyance study	10,000
78	Delta water management program	50,000
	Operations and maintenance (mid-Pacific region):	
94	Weather Modification Technology Transfer Program (mid-Pacific)	530,000
	Loan projects (mid-Pacific region)	
100	Monterey County reclamation project for crop irrigation (Monterey)	Support
101	Castroville irrigation water supply project (Monterey)	Support
	Public Law 102–575 (Central Valley Project Improvement Act):	
106	Glenn-Colusa Irrigation District pumping plant—fish entrainment and related problems.	2,000,000
107	West Basin Municipal Water District water recycling infrastructure program (Los Angeles).	12,500,000
108	San Gabriel ground water conjunctive use project (Los Angeles)	5,000,000
125	Coleman National Fish Hatchery rehabilitation (Shasta, Tehama) (U.S. Fish and Wildlife Service).	4,100,000
	Loan projects (lower Colorado region):	....
102	Eastern Municipal Water District water facilities plan (Riverside)	8,636,000
103	San Sevaine Creek water project (San Bernardino, Riverside)	1,000,000
104	Elsinore Valley Municipal Water District (Riverside)	1,000,000
105	Jurupa Community Services District (Riverside)	Support

U.S. ARMY CORPS OF ENGINEERS

CWC 3—Callegeas Creek (Ventura). An appropriation of $130,000 will allow the Corps to continue the feasibility investigation.

CWC 11–8—San Joaquin River Mainstem. An appropriation of $950,000 will allow the Corps to conduct a restoration demonstration project and a reconnaissance flood control project in the Firebaugh and Mendota area.

CWC 11–10—Arroyo Pasajero—Corps of Engineers.

CWC 67—San Luis Unit—Central Valley Project (Includes funds for the Arroyo Pasajero flood control project). An appropriation of $400,000 will allow the Corps to continue the basinwide feasibility investigation. An appropriation of $4.4 million will allow the Bureau of Reclamation to continue to purchase land needed for flood water storage and to participate in ongoing flood control programs.

CWC 14A—Santa Ana River—Norco Bluffs (Riverside). An appropriation of $150,000 will allow the Corps to continue the feasibility investigation.

CWC 33—San Joaquin River Basin—Tule River (Success Reservoir) (Tulare). An appropriation of $100,000 will allow the Corps to continue the design of the Success Reservoir enlargement.

CWC 36—Coyote and Berryessa Creeks (Santa Clara). An appropriation will allow continued construction of the Coyote and Berryessa Creeks project.

CWC 40—Sacramento River Restoration at Glenn-Colusa Irrigation District (Glenn).

CWC 106—Glenn-Colusa Irrigation District Pumping Plant Fish Entrainment and Related Problems. With $400,000 the Corps can continue with the design and preparation of specifications for the riffle. An appropriation of $2.0 million will allow the Bureau of Reclamation to assume its role of lead Federal agency.

CWC 44—New Melones Lake (Calavaras, Tuolemne). An appropriation of $1.3 million will allow continued construction of the recreation facilities.

CWC 54—Sacramento Urban Levee Reconstruction Project (Sacramento). An appropriation of $6.0 million will provide for construction of the last remaining portion of the project.

U.S. BUREAU OF RECLAMATION

CWC 60—Auburn Folsom South Unit—Central Valley Project. An appropriation of $1,850,000 will allow the Bureau of Reclamation to continue the cost shared feasibility investigation.

CWC 61—Shasta Temperature Control Device (Shasta). An appropriation of $13.0 million will allow continuation of design and initiation of construction.

CWC 76—Offstream Storage. An appropriation of $10,000 will allow the feasibility investigation to continue.

CWC 77—San Joaquin Valley Conveyance Study. An appropriation of $10,000 will allow the feasibility investigation to continue.

CWC 78—Delta Water Management. An appropriation of $50,000 will provide for continued Bureau of Reclamation participation in ongoing programs.

CWC 94—Weather Modification Technology Transfer Program. An appropriation of $530,000 will provide for Bureau of Reclamation participation in this new program.

CWC 100—Monterey County Reclamation Project for Crop Irrigation.

CWC 101—Castroville Irrigation Water Supply Project (Monterey). The Commission supports funding for these Small Reclamation Project loans subject to the approval of the Secretary of the Interior.

CWC 102—Eastern Municipal Water District (Riverside). An appropriation of $8,636,000 will provide continuing Federal funding of the Small Reclamation project loan.

CWC 103—San Sevaine Creek Water Project (San Bernardino). An appropriation of $1,000,000 would initiate Federal funding of the Small Reclamation Project loan.

CWC 104—Elsinore Valley Municipal Water District (Riverside). An appropriation of $1,000,000 would initiate Federal funding of the Small Reclamation Project loan.

CWC 105—Jurupa Community Services District (Riverside). The Commission supports funding for the project subject to approval of the Secretary of the Interior.

CWC 107—West Basin Municipal Water District—Water Recycling Infrastructure Program (PL 102–575). An appropriation of $12,500,000, would provide Federal funding of this cost-shared project.

CWC 108—San Gabriel Groundwater Conjunctive Use Project (Los Angeles). An appropriation of $5,000,000 will initiate Federal funding of this cost-shared project.

CWC 125—Coleman National Fish Hatchery (Shasta, Tehama): An appropriation of $4,100,000 to the Bureau of Reclamation will provide for new water supply facilities.

STATEMENT OF RAYMOND BARSCH, GENERAL MANAGER, STATE RECLAMATION BOARD

Mr. BARSCH. Thank you, Mr. Chairman. Mr. Chairman and Senator Feinstein, I am Raymond Barsch, general manager of the Reclamation Board.

I appreciate the opportunity to be here today and to recommend to you the 22 projects that are within the Central Valley that were approved by the Reclamation Board on March 11, 1993. I will highlight just four of those projects.

AMERICAN RIVER WATERSHED PROJECT

Sacramento is still a city at risk. The Corps of Engineers needs funding in the amount of $2 million to continue to work toward the needed solution of that flood threat.

SACRAMENTO URBAN AREA LEVEE RECONSTRUCTION

Second is the Sacramento urban area levee reconstruction project. This work is not completed. There is one section of the wall that is called the river wall, right in the town of Sacramento. This is now the weak link in the chain. The Corps needs $6 million to finish this $50 million cost-shared project.

SACRAMENTO RIVER RESTORATION—GLENN COLUSA IRRIGATION DISTRICT

The work at the Glenn-Colusa Irrigation District intake structure is another critical project. And we certainly appreciate Senator Feinstein's support on this project. The Corps needs $400,000 to finish the design of that fish restoration effort.

SAN JOAQUIN MAINSTEM PROJECT

Fourth is the San Joaquin River mainstem project. The Corps needs around $600,000 to implement a cost-share demonstration project and $350,000 for a site specific reconnaissance study to determine the solutions to flood problems in the cities of Firebaugh and Mendota.

The funding for these two projects on the San Joaquin River is in lieu of proceeding with the feasibility study. Thank you again for your continuing support on California's flood control projects.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF RAYMOND BARSCH

RECLAMATION BOARD'S FINAL RECOMMENDATIONS FOR FEDERAL FLOOD CONTROL PROJECTS—1994 SUMMARY

Corps of Engineers' projects	Estimated amount	Board recommends
General investigations (surveys):		
Northern California streams:		
Cache Creek basin (Lake County)	$400,000	$400,000
South Sacramento County streams	350,000	350,000
Upper Sacramento River	250,000	250,000
Westside tributaries Yolo bypass	350,000	350,000
Yuba River watershed	300,000	300,000
Sacramento-San Joaquin delta investigations	900,000	900,000
San Joaquin River basin:		
Arroyo Pasajero	400,000	400,000
Caliente Creek	300,000	300,000
San Joaquin River mainstem	950,000	950,000
Pine Flat F&W habitat restoration	240,000	240,000
General investigations (PE&D):		
American River watershed	2,000,000	2,000,000
West Sacramento	1,000,000	1,000,000

RECLAMATION BOARD'S FINAL RECOMMENDATIONS FOR FEDERAL FLOOD CONTROL PROJECTS—1994 SUMMARY—Continued

Corps of Engineers' projects	Estimated amount	Board recommends
Kaweah River	500,000	500,000
Tule River	....	100,000
Construction projects:		
Marysville/Yuba City levee reconstruction	800,000	800,000
Merced County streams	1,100,000	1,100,000
Redbank and Fancher Creeks	500,000	500,000
Sacramento River bank protection	2,500,000	2,500,000
Sacramento River flood control	2,350,000	2,350,000
Sacramento River restoration at Glenn-Colusa ID	....	400,000
Sacramento urban area levee reconstruction	....	6,000,000
Operations and maintenance: Inspection of completed works—Sacramento River flood control	425,000	425,000

RECLAMATION BOARD'S RECOMMENDATIONS

The Reclamation Board, as the State agency which furnishes required local assurances for a majority of the federal flood control projects in California's Central Valley, respectfully submits this statement of support for the following projects.

The projects described below are of particular importance to the health, safety, and well-being of Central Valley residents and are important to the Reclamation Board to see that they are kept on schedule.

SURVEYS

Northern California streams

This survey, authorized in 1958 and 1962, is a study of the Sacramento River and its tributaries, in regard to flood control measures.

Cache Creek Basin (Lake County).—The Corps of Engineers has recently completed a reconnaissance study in the Cache Creek Basin. This reconnaissance study investigated numerous flood control measures including a detention basin, upstream storage, outlet channel improvements, modification and reoperation of the Clear Lake dam, pumped storage, and nonstructural measures. All measures were eliminated except for nonstructural measures. Cost-shared feasibility studies will be initiated this year to further refine the nonstructural plan.

The Reclamation Board supports $400,000 for this investigation, which would be used to continue feasibility studies.

South Sacramento County Streams.—These streams are located in the southerly portions of the City of Sacramento. The existing flood control projects in Sacramento do not address the flood issues in this rapidly developing area.

This reconnaissance-level investigation will start in the spring of 1993. The Reclamation Board supports $350,000 for continuation of this investigation.

Upper Sacramento River Fish and Wildlife Habitat Restoration.—In March 1993, the Corps of Engineers will initiate the Upper Sacramento River Fish and Wildlife Habitat Restoration study. This is a reconnaissance study that will investigate alternatives for restoring fish and wildlife habitat impacted by the following flood control projects: Sacramento River Flood Control Project, Sacramento River Bank Protection Project, and the Chico Landing to Red Bluff Project. The study will evaluate the feasibility of integrating flood control measures and environmental improvements and identify potential alternative solutions. California Senate Bill 1086 presents a comprehensive plan for fishery and habitat improvements along the Sacramento River. The study will determine whether there is a federal interest in the concepts outlined in SB 1086 and if so, whether the Corps of Engineers should participate with the State in implementation of a comprehensive restoration plan.

The Reclamation Board supports $250,000 to complete the reconnaissance study and initiate the feasibility phase investigation.

Westside Tributaries to the Yolo Bypass.—In April 1993, the Corps of Engineers will initiate a reconnaissance-level investigation to study the existing levees and other flood control facilities on the west side of the bypass as well as the adjacent streams including Cache Creek, Putah Creek, and Willow Slough in Yolo and Solano

Counties. Appropriate measures to provide higher levels of flood protection for the Cities of Woodland and Davis will be addressed.

The Reclamation Board supports $350,000 to complete this reconnaissance investigation and initiate the feasibility phase.

Yuba River Watershed.—The 1986 flood and the resulting levee failure made everyone aware that flooding is a public safety issue in this area. Thus, a reconnaissance-level study of alternatives for flood control and related purposes in the Yuba River watershed was completed, and a cost-shared feasibility study was initiated. The Reclamation Board supports $300,000 for continuation of this feasibility investigation.

Sacramento-San Joaquin delta investigation

The study area is located in Sacramento, Yolo, San Joaquin, Contra Costa, and Solano Counties and extends from the southern limits of the City of Sacramento to Tracy, and from the City of Stockton west to Suisun Bay. The area consists of about 700,000 acres of land segregated into some 100 tracts and islands, bounded by interconnecting waterways, which are confined by 1,100 miles of levees which normally prevent the lands from being inundated by high tides or high water stages. Lands within these levees are among the most productive agricultural lands in the State. The survey considers flood control, environmental issues, associated recreation, water supply and salinity intrusion issues. A critical need for levee rehabilitation throughout the Delta exists. Current activities include coordination with the U.S. Bureau of Reclamation and other federal agencies, and the California Department of Water Resources and interested parties to formulate the comprehensive plan.

The Reclamation Board supports $900,000 for continuation of this investigation.

San Joaquin River basin

This survey, authorized in 1964 and initiated in 1968, encompasses the southern portion of the Central Valley, including part of the Delta-Central Sierra area and all of the San Joaquin and Tulare Lake Basins. The study will investigate the problems of flood control, irrigation, municipal water supply, power, recreation, and fish and wildlife. Flooding is a major problem and during the severe floods of 1969, 1983, and 1986, the area experienced extensive damages. Projects include dams and reservoirs, stream diversion, bank protection, and levee and channel improvement. Numerous individual studies continue under this basin authorization.

Arroyo Pasajero.—There is a flood problem associated with the Arroyo Pasajero and Cantua Creek watersheds near Coalinga, California in southwest Fresno County. Updated hydrologic and sedimentation studies now reveal that both the estimated sediment loads and storm volumes are several times greater than original design estimates. There are several public facilities in the flood-plain including the California Aqueduct, Lemoore Naval Air Station, Interstate 5, and Highway 198. The lands east of the California Aqueduct are subject to flood damage as well as the Aqueduct.

The Reclamation Board supports $400,000 to continue the investigation. The funds would be used to conduct feasibility-phase studies.

Caliente Creek.—The previous feasibility study determined that a detention basin dam was infeasible. Alternative flood reduction measures are being considered including nonstructural alternatives.

The Reclamation Board supports $300,000 to continue the new feasibility investigation.

San Joaquin River mainstem.—This program is currently budgeted for completion of the reconnaissance investigation and initiation of the feasibility study. The reconnaissance study has determined that an environmental restoration with flood control alternative is feasible. Discussions are continuing between the potential nonfederal sponsors and the Corps in developing a course of action for carrying this alternative forward.

Recent discussions between the Corps and potential nonfederal sponsor have determined that instead of proceeding with a traditional feasibility study, it may be more advantageous to develop a demonstration program to implement portions of the favorable alternative identified. Consequently, a pilot program is being developed to implement portions of the environmental restoration with flood control alternative recommended under the San Joaquin River Mainstem and Tributaries reconnaissance study.

This pilot project, to be carried out on California Department of Fish and Game lands, would combine construction of facilities to restore wetland refuge habitat with features allowing the diversion of floodwater to the refuge area during peak flow periods. Such floodwater diversions provide some flood control benefits as well as additional environmental restoration value. The Corps of Engineers would design and construct environmental restoration and flood control features for approximately 4,730 acres of land currently owned and planned for refuge development by the California Department of Fish and Game referred to as the China Island Unit.

Because of the geographical extent that the study covered, a very broad analysis was used. This type of analytical approach was unable to focus on site-specific issues. Therefore, the study contains no recommendations regarding the flooding issues in the Cities of Firebaugh and Mendota. We recommend that the Corps pursue a site-specific flood control reconnaissance study for these cities.

Additional congressional authorization would be appropriate for the Corps to proceed with these types of programs. The feasibility study currently authorized as a result of the San Joaquin River Mainstem and Tributaries Reconnaissance Investigation would be deferred until results of the site specific reconnaissance study and the demonstration program have been determined.

These efforts are compatible with the San Joaquin River Management Program that was recently enacted by the California Legislature.

The Reclamation Board supports $950,000 to implement and evaluate a site specific reconnaissance study and a demonstration project for portions of the environmental restoration with flood control alternative.

Pine Flat Fish and Wildlife Habitat Restoration Investigation.—This investigation is a reconnaissance-level study to investigate the potential for fish and wildlife restoration in the Kings River Basin. While this effort will focus on many environmental restoration alternatives, Congress has specifically directed the Corps to also examine the potential for enlarging Pine Flat Dam for environmental restoration purposes. If such a measure were found to be feasible, associated incidental flood control and water supply benefits would likely occur.

The Reclamation Board supports $240,000 to complete the reconnaissance-level and initiate the feasibility-level investigations.

GENERAL INVESTIGATIONS (PE&D)

American River watershed

The Reclamation Board and the Department of Water Resources acted as the nonfederal sponsor for the Feasibility Study on the American River Watershed which has been completed. This project was not authorized in 1992; however, the Corps was directed to continue work on the critically needed flood control project.

This work will answer the questions that were raised during the authorization hearings. While the study and debate on the type of dam continues, The Reclamation Board supports $2,000,000 for preconstruction engineering and design for this project. The Sacramento Area still faces one of the most severe threats of flooding in the nation. Resolution of this debate must be resolved expeditiously.

West Sacramento

The Reclamation Board is also the nonfederal sponsor for the West Sacramento flood control project which was authorized for construction by the Water Resources Development Act of 1992.

The Reclamation Board supports $1,000,000 to complete the preconstruction engineering and design for this project.

Kaweah River

The study is to evaluate the feasibility to provide additional storage at Lake Kaweah (Terminus Dam) for increased flood protection.

The Reclamation Board supports $500,000 to begin the preconstruction engineering and design.

Tule River

The Corps of Engineers has completed its feasibility report for the enlargement of Success Dam and Reservoir on the Tule River. The report recommends the enlarging of the existing dam and reservoir. There is presently an unresolved issue on seismic stability; however, this issue is being investigated by the Corps under O&M Appropriations. The Corps should proceed to preconstruction engineering and design when the safety issues are resolved.

The Reclamation Board supports $100,000 for this project.

CONSTRUCTION PROJECTS

Marysville/Yuba City levee reconstruction

The Sacramento River Flood Control Project was authorized in 1917 and modified by various Flood Control and/or River Harbor Acts in 1928, 1937, and 1941.

This program would allow reconstruction of 44 miles of the 134 miles of levees which protect the Marysville/Yuba City area. The program will be cost shared with a number of local agencies. After execution of a Project Cooperation Agreement in 1993, the first of three construction contracts is scheduled to start in 1994.

The Reclamation Board supports $800,000 for construction of this project.

Merced County streams

This project, authorized in 1970, will provide flood protection for Castle Air Force Base, the City of Merced, and adjacent suburban and agricultural lands. Castle Dam has been completed. The construction began in the spring of 1991 and the 1993 funding will finish the check structure in the Main Canal which will complete Phase I of the project.

The Reclamation Board supports $1,100,000 to prepare plans and environmental documents for construction on Phase II of this project.

Redbank and Fancher Creeks

The Corps of Engineers is constructing flood control improvements on Redbank, Fancher, Pup and Big Dry Creeks and Alluvial Drain.

The project is under construction and The Reclamation Board supports $500,000 to complete the entire project.

Sacramento River bank protection

The project, authorized in 1960, is a long-range federal-State effort, aimed at preserving the existing project levee system of the Sacramento River. These existing levees offer flood protection along 192 miles of the Sacramento River between Collinsville (in the Delta) to Chico Landing. The Sacramento River Bank Protection Project work consists of providing some form of bank stabilization at those points which are identified each year as the most critical.

The Reclamation Board as nonfederal sponsor supports $2,500,000 for continuing construction of the Sacramento River Bank Protection Project.

Sacramento River flood control

This project was authorized in 1917 and modified by various Flood Control and/or River Harbor Acts in 1928, 1937, and 1941.

The project comprises a comprehensive system of levees, over-flow weirs, drainage pumping plants, and flood bypass channels, extending along the Sacramento River from Collinsville to Chico Landing.

Areas of remaining effort on this project are final design for the levee restoration work on levees in the remaining areas of the Sacramento River Flood Control System Evaluation (Phases III, IV and V).

The Reclamation Board supports $2,350,000 for this program.

Sacramento River restoration at Glenn-Colusa Irrigation District

This project involves restoration of the hydraulic characteristics of the main channel of the Sacramento River. The Corps of Engineers is conducting the engineering and design of works to restore the elevation of the Sacramento River in the vicinity of the Glenn-Colusa Irrigation District intake to conditions existing prior to the flood of 1970.

The Reclamation Board supports $400,000 for final design and other necessary work for this project.

Sacramento urban area levee reconstruction

This is a part of 110 miles of levee that protect the City of Sacramento which has been under construction the last few years. There is a short stretch of levee along the Sacramento River adjacent to downtown Sacramento which has a "floodwall" on the water side. This "floodwall" has been determined to be unsafe; however, was not fixed when the other deficiencies were taken care of as part of this authorization. It is estimated that $6,000,000 would be needed for the federal share to complete this cost-shared project.

The Reclamation Board supports $6,000,000 to complete the construction of this project.

OPERATIONS AND MAINTENANCE

Inspection of completed works—Sacramento River flood control Project

The Reclamation Board is concerned about the long-term integrity of the Sacramento River Flood Control System. The project is an integral part of the States flood control plan and protects over one million people and billions of dollars in property. A break in the project levee on the Yuba River flooded thousands of homes in February 1986, and other areas within the project were seriously stressed. Geotechnical work performed by the Corps of Engineers will determine where design deficiencies exist within the levee system.

The Reclamation Board supports $425,000 for continuing appraisal studies and geotechnical work for the next 250 miles of levees (Phase V) in the Sacramento River Flood Control Project levee system.

LOS ANGELES COUNTY DRAINAGE AREA [LACDA]

STATEMENT OF CARL BLUM, ASSISTANT DEPUTY DIRECTOR, LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

Senator JOHNSTON. Mr. Carl Blum.

Mr. BLUM. Thank you. Good afternoon, Mr. Chairman and Senator Feinstein.

I am Carl Blum of the Los Angeles County Department of Public Works. In Los Angeles, we have a large river flood control system. It was built 40 or 50 years ago by the Corps of Engineers. It has served us well.

However, since that time, the tremendous growth that has taken place in southern California has, basically, rendered portions of this river too small. And we need to do something about it.

During the 100-year storm, we would experience at this point in time about 82 square miles of fully developed portions of the city being inundated, affecting two-thirds of a million people and causing over $2.25 billion in damage.

I urge your committee's continued support, as you have over the years, for this project, and specifically to continue the Corps of Engineers preconstruction engineering and designing allocation of $3.63 million for this coming year.

The second item I would like to bring up is that recently we have experienced widespread serious flooding in the Antelope Valley portion of northern Los Angeles County.

And here I support the water commission's recommendation for $325,000 for the Corps to do a reconnaissance study to determine the needs for flood control in that area.

Thank you very much.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF CARL L. BLUM

Summary of recommendations by Los Angeles County Department of Public Works concerning budget allocations to the U.S. Army Corps of Engineers.

Los Angeles County Drainage Area (LACDA).—We are deeply appreciative of the continued support of this esteemed Committee for this largest of all urban Flood Control systems. We strongly support the California Water Commissions recommendation to the Committee for $3.63 million to fund the Preconstruction, Engineering and Design (PED) phase of the LACDA project.

Northern Los Angeles County (Antelope Valley).—We strongly support the California Water Commissions recommendation to the Committee for $325,000 to fund a Reconnaissance Study on the flood control needs of this area.

Mr. Chairman and gentlemen, floods are a part of the history of the Los Angeles basin. Widespread floods have periodically devastated vast areas of the basin and were responsible for taking of lives, damaging property and interrupting commerce and trade. The level of flooding was so great that, at times, the County was isolated from the rest of the nation.

The Corps of Engineers and County of Los Angeles, through its Flood Control District, have built one of the most extensive and sophisticated flood control systems in the world. Construction of the major elements of the system began in the 1930s. Since the major segments were completed, it is estimated that the system has prevented $3.6 billion in potential flood damage.

Development which occurred after World War II exceeded the projections the designers made in the 1930s and has increased runoff to the point where, even in a moderate storm, the runoff could exceed the design capacity of the system. Portions of the system are seriously deficient. For example, the lower Los Angeles River in the City of Long Beach can only carry runoff from a 40-year storm and came close to overtopping in 1980. A flood of greater magnitude would have a tremendous impact, both personal and economic, on Los Angeles County, the nations second largest metropolitan area.

Therefore, at the request of Los Angeles County, the U.S. Army Corps of Engineers analyzed the adequacy of the existing major flood control facilities serving the Los Angeles basin in the LACDA Review Study. In 1987, the Corps of Engineers completed the problem Identification Phase of the study. The LACDA Report has been finalized and we are pleased to report that the Corps has made good progress. On February 14, 1992, the Corps received the District Engineer's Notice to proceed with the next phase of the project, PED. We estimate that PED would take three years with a total expenditure of $10.5 million.

The Final Report identifies 100-year flood damages totaling $2.25 billion covering an 82-square-mile area which houses 625,000 people. A 500-year flood would inundate 193 square miles and cause $5.1 billion in damages. All these damages would occur in the heavily-urbanized Los Angeles basin.

These potential damages are similar to those identified for the Santa Ana River project in nearby Orange County. By comparison, in a 100-year flood, the Santa Ana River could flood a 60-square-mile area, causing $3.0 billion in damages, affecting 310,000 people.

To mitigate the flood threat of the Los Angeles River, the Corps of Engineers reviewed alternative solutions during the last several years. The proposed project involves increasing the effective height of the levees and raising 27 of the bridges over the Los Angeles River below South Gate and on the Rio Hondo Channel south of Whittier Narrows Dam. The total project cost is approximately $364 million and has an extremely favorable cost-benefit ratio providing protection consistent with the National Development Plan from a greater than 100-year storm.

The proposed project received Congressional approval in 1990 subject to a favorable report by the Chief of Engineers and signature by the Secretary of the Army. The Board of Engineers for Rivers and Harbors recommended approval of the Chief Engineer's Report in June 1992.

The Antelope Valley is a diverse region in climate, geology, physiography and environmental resources. The economic base in the valley has shifted from agriculture and mining to defense-related industries. Due to the proximity to major urban areas, an expanding industrial base, and the availability of low-cost housing, the area has experienced a rapid growth rate. The valley now has a population of approximately 250,000. Flooding problems are concentrated in the population centers in and around the Cities of Palmdale and Lancaster, where flood flows seriously impact existing infrastructure and private property structures, as well as the operations on Edwards Air Force Base.

Flood control has been a recurrent topic in the Antelope Valley. Earlier studies by the U.S. Army Corps of Engineers, dating back to the 1970's, examined a variety of solutions to the regional flooding problems. However, sufficient benefits could not be identified to justify a Federal involvement at that time.

Since then, the County adopted the Antelope Valley Comprehensive Plan of Flood Control and Water Conservation which evaluated the extent of projected runoff and flooding potential and identified the need for some $800 million in critical drainage construction. Local funding is extremely limited, and implementation of the plan has reached an urgent level.

Continued development in the Antelope Valley, along with substantial damages from recent storms, has reinforced the need to evaluate possible Federal involvement in addressing the flood control needs of this Valley.

Therefore, we strongly urge that Congress include $3.63 million for the LACDA Study and $325,000 for the Northern Los Angeles County (Antelope Valley) Reconnaissance Study in the President's Budget for fiscal year 1994 so that both projects may proceed as soon as possible.

STATEMENT OF DANIEL W. WATERS, GENERAL MANAGER, LOS ANGELES DEPARTMENT OF WATER AND POWER

ENERGY POLICY ACT OF 1992

The Los Angeles Department of Water and Power (LADWP) is the largest municipal utility in the nation serving over 1.3 million customers in the City of Los Angeles. LADWP's electricity generating capacity exceeds 7000 megawatts and it operates a system of facilities which includes several thousand miles of high-voltage AC and DC transmission lines. These facilities are located in the Los Angeles area and in several Western states.

We appreciate the opportunity to provide this statement for the record on several energy-related items under the subcommittee's jurisdiction.

First, we respectfully request subcommittee approval of funding for a new renewable energy resource program authorized in the Energy Policy Act of 1992 (Act; P.L. 102–486). Section 1212 of the Act authorizes the Department of Energy (DOE) to make direct payments of 1.5 cents per kilowatt hour to new renewable energy projects owned or operated by publicly-owned electric utilities. For purposes of this section, renewable energy source is defined as wind, solar, biomass, and geothermal.

Encouraging renewable energy resources is now a national policy established by Congress under the Act. Renewables are not only environmentally protective, they also serve to reduce the nation's dependence on imported oil.

LADWP is planning several renewable energy projects to meet the increasing demand for electricity in Los Angeles through the end of this century. The first and largest of these is a geothermal facility at Coso in the California desert. This is a proven geothermal resource and LADWP intends to generate 150 megawatts of electricity there, starting with a first phase project of 60 megawatts coming on line in 1995. Other projects under consideration by LADWP include those using wind and photovoltaic energy sources. The availability of a production incentive from DOE would add a significant factor to the planning and decision considerations regarding the viability of proceeding with such projects.

Moreover, funding of the renewable energy production incentive will provide publicly-owned utilities with an incentive commensurate with one already provided by the Act to investor-owned utilities in the form of a tax credit. The incentive authorized in Section 1212 will allow publicly-owned utilities to participate equally in the development of these types of projects which will, in turn, accelerate the commercial viability of these resources.

We request an appropriation of $25 million for this program for fiscal year 1994. In addition, we ask that the subcommittee stipulate that unobligated funds remaining at the end of the fiscal year be carried forward for use by this program in the following fiscal year. This will help to instill utility confidence in Congress' and DOE's commitment to the program, thereby reducing some of the risk inherent in electricity generating projects.

Second, we respectfully request the subcommittee's approval for $18 million in fiscal year 1994 for electric and magnetic field (EMF) research conducted by or in conjunction with DOE. This would be a combination of DOE's baseline funding of $6 million for fiscal year 1993 and $12 million for the new expanded and accelerated research program authorized in Section 2118 of the Act. Section 2118 authorizes $65 million over five fiscal years to accelerate and increase the health-based research necessary to determine whether or not exposure to EMF poses a human health threat. Half of the total amount appropriated pursuant to this section will be provided from non-federal sources, and the electric utility industry, including LADWP, is committed to providing its share. The public is increasing its demands that answers be found to these troubling health questions relative to the everyday use of electricity and we urge the subcommittee to support the need for increased research.

Lastly, LADWP is increasing its activity in the area of solar energy and we would like to highlight two current federal programs in this area which we support for continued funding. The first of these is DOE's Solar Two project which is cost-shared by the federal government with several utilities and manufacturers and represents the last step in transforming this technology to commercial application. This 10 megawatt demonstration plant is designed to use components that can be scaled to 100 megawatts for the first major powerplant to use this technology.

We also supports DOE's efforts to commercialize photovoltaic technology. We believe that the ongoing public-private partnership on this technology sponsored by DOE can build an industry that will provide an important source of clean energy for the future.

Thank you for your consideration of this statement. As always, we welcome any opportunity to work with the subcommittee on these matters.

WATER RESOURCE PROJECTS

The Los Angeles Department of Water and Power (LADWP) is the largest municipal utility in the United States serving over 1.3 million customers within the City of Los Angeles.

Our purpose in providing this statement is to respectfully request the subcommittee's approval and inclusion of an appropriation of $250,000 for fiscal year 1994 for LADWP's water reuse projects authorized pursuant to Section 1613 of Public Law 102–575, the Water Projects Authorization and Adjustments Act of 1992 (Act).

Section 1613 of the Act authorizes the Secretary of the Interior to participate in the design, planning, and construction of water reuse projects within Los Angeles County. It specifically provides for federal funding participation of up to twenty-five percent of the cost of such projects undertaken in conjunction with the City and County of Los Angeles and other agencies to reuse up to 120,000 acre-feet of reclaimed water

LADWP is developing several water reuse projects which are eligible for federal participation under this section. It was partly in recognition of the need to accelerate these specific projects that the Act's relevant provisions were included by the House and Senate authorizing committees.

Los Angeles is an arid region that has traditionally relied heavily on imported sources of water to meet its needs. And for the foreseeable future, imported water will continue to provide most of the necessary supply. However, increased environmental concerns, several recent years of drought, limitations on the ability to further develop state water supplies, and other factors have caused Los Angeles to aggressively pursue alternative water resources, including conservation. Also among these alternatives is a commitment to beneficially reuse 250,000 acre-feet per year (AFY) of treated wastewater by the year 2010, an amount which represents approximately 40 percent of the City's effluent. Most of this reclaimed water will be used for landscape irrigation and for groundwater recharge.

The cornerstone of this commitment is the East Valley Water Reclamation Project. Water from the project will be used for groundwater recharge in the San Fernando Valley and for industrial and irrigation uses along the pipeline route to the groundwater spreading basins. Pending approval from regulatory agencies, up to 32,000 AFY will be used for groundwater recharge and 3,000 AFY for industrial and irrigation purposes. The total cost of the project is estimated to be $50 million. Other projects are also under development by LADWP which will provide irrigation for city parkland and additional water for industrial and recreational use.

Los Angeles intends to move ahead as quickly as possible with these projects. Further, we understand the Secretary of the Interior and the Bureau of Reclamation also are committed to expeditiously implementing the new program established under Title 16 of the Act. We appreciate their enthusiasm and look forward to working with them. The remaining and equally important element is the provision of the federal funding share. Therefore, we respectfully urge Congress to appropriate the necessary funds for fiscal year 1994 that will accelerate LADWP's establishment of these needed alternative water sources.

We appreciate the opportunity to submit this statement and we wish to acknowledge the subcommittee's longstanding support for water resource development and management in California.

REDBANK AND FANCHER CREEKS FLOOD CONTROL PROJECT

STATEMENT OF FRANK FRANCO, DIRECTOR, FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Mr. HILL. Our next is Mr. Frank Franco.

Mr. FRANCO. Mr. Chairman, Senator Feinstein, first of all, Senator Feinstein Fresno County is very proud of you.

My name is Frank Franco. I am on the board of directors for the Fresno County Flood Control District.

We request support in our Redbank and Fancher Creeks project and request the appropriation of $500,000 to complete the project. Our agency has thus far expended $50 million in compliance with our project contract and have transmitted $3,600,000 in cash contributions to the Corps.

The project will soon be completed at a cost of $66 million, a savings of $53 million from the project's authorized cost.

Thank you.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF FRANK FRANCO

Mr. Chairman and members of the committee, my name is Frank Franco and I am a member of the Board of Directors of the Fresno Metropolitan Flood Control District of Fresno County, California, the local sponsor for the Redbank-Fancher Creeks Flood Control Project. I am authorized to speak on behalf of the County of Fresno, the Cities of Fresno and Clovis, and the Fresno Irrigation District. In addition, the State of California has enacted legislation approving the project and authorizing financial participation.

We respectfully request continuing project construction be retained in the fiscal year 1993–94 budget in the sum of $500,000 as provided in the Presidents budget. This sum represents the final construction unit of the project which will complete flood protection for the Fresno-Clovis metropolitan area and, key elements of the areas extensive agricultural industry.

The Redbank-Fancher Creeks Project was initially identified in the Big Dry Creek project investigation of 1940 and the resulting Fresno County Streams project authorization. In 1956, the Congress specifically authorized investigation of a project modification relating to the balance of the stream system. Unfortunately, federal funds were not appropriated until the disastrous 1969 floods.

The Redbank-Fancher Creeks Project has been proven environmentally sound and economically justified on the basis of flood damage prevention alone. Though other benefits accrue, they are not required to produce a positive benefit/cost ratio. The project will provide protection to the metropolitan area of Fresno County containing a population in excess of 500,000. The benefit/cost ratio reported in the 1986 GDM is 1.6:1 at an 8⅝% interest rate, including CPE cost. Current estimates suggest the final benefit/cost ratio will approach 1.9/1.0.

Estimated average annual flood damages exceed $14,000,000 and affect both urban and agricultural land. The project will also protect an open irrigation canal system which transverses 210,000 acres of the worlds most productive agricultural lands, Fresno County's gross annual production exceeding 2.6 billion dollars. The project will control the historic flooding which has seen the stream and canal systems overflow an average of once every four years.

The project was reported to Congress as House Document 98–147 and was authorized for construction through PL 99–662. The LCA has been executed and the local funding mechanisms put into place. To date the local sponsor has expended $15,000,000 in compliance with its LCA obligations to the Government. The requested federal appropriation will complete all major project construction.

We appreciate the privilege of appearing before the Committee and the past support given the project. We urge your continued support and ask that our statement and the attached detailed presentation be made a part of the hearing record.

The people of the central county area of Fresno County, California are deeply appreciative of the opportunity to have the presentations of their representatives heard by the honored members of the Congress. While the Redbank-Fancher Creeks Flood Control Project is not large by some standards, it is critically important to the Fresno-Clovis metropolitan area which is the business center of the most productive agricultural county in the world, gross annual production exceeding $2.6 billion.

This report, first submitted in May 1971, has been submitted annually to substantiate the continuing need for completion of the flood control works specified in the Redbank and Fancher Creeks project report.

Authorization

The Redbank-Fancher Creeks project is a modification of the existing Fresno County Streams, California authorization, incorporating the enlargement of the Big Dry Creek Dam and the containment of the balance of the stream group.

The Congress, on June 13, 1956, authorized the Corps of Engineers to reinvestigate the stream group project, this following the major floods of 1955 and 1956. Unfortunately, funds were not provided and the Corps did not begin the investigation until the area had suffered its worst flooding in history during January and February 1969. The release of funds and the start of the investigation occurred in July 1970, some fourteen years after Congressional authorization.

During July 1980, the Board of Engineers of Rivers and Harbors forwarded to the Chief of the Corps of Engineers the completed project report and environmental impact report. The report was forwarded to the Congress as House Document 98–147, bearing the date January 24, 1984. The project was authorized for construction pursuant to PL 99–662. and the LCA was executed with the local sponsor (the Fresno Metropolitan Flood Control District) on August 1, 1987. Construction was begun in fiscal year 1987 and is currently in progress. Completion is scheduled in fiscal year 1994.

Project location and need

Redbank, Fancher, and Big Dry Creeks of the Fresno County Stream Group, their tributaries and related streams addressed by the project, are located on the western slope of the Sierra Nevada mountains. The watershed encompasses some one hundred seventy five square miles and generates storm runoff which flows through the heart of the metropolitan area. The flows impact directly on the open irrigation canal system which transverses some 210,000 acres of the world's most productive agricultural land and 95,000 acres of a densely developed urban community with a population in excess of 500,000.

It is currently estimated that the flood plain to be protected by the proposed project includes 37,900 acres with an estimated 1991 market value of $4.2 billion. Total estimated average annual flood damages exceed $14,000,000 and affect both urban and agricultural properties.

History of flooding

As a result of the uncontrolled nature of the subject stream group, flooding has occurred frequently. Floods of record occurred in March 1938, December 1955, January 1956, January 1969, February 1969, March 1978, January 1983 and January 1993. In addition, available records indicate flooding of lesser severity occurred in 1914, 1915, 1916, 1937, 1958, 1965, 1972, 1977, and 1986 with the streams and irrigation canal system overtopping their banks on the average of once every four years.

The floods of January 1993 deserve special notice. While Fresno County received both State and Federal emergency declarations, the project was sufficiently complete to prevent most major flooding in the Fresno-Clovis area. Millions of dollars in flood damage losses were saved, clearly demonstrating the need for and value of this project.

Local support

Following the floods of January and February 1969, the Fresno-Clovis area was declared a federal disaster area. With the realization millions of dollars in flood damage could have been prevented and a recurrence of such floods would be even more devastating, a public hearing on the needed flood control works was held on February 18, 1969. Hundreds of citizens representing some seventy-five public and private organizations met and drafted resolutions to the U. S. Army Corps of Engineers and legislative representatives urging active pursuit of the Redbank-Fancher Creeks Flood Control Project. Subsequently, the County of Fresno, the Cities of Fresno and Clovis, the Fresno Metropolitan Flood Control District, and the Fresno Irrigation District, authorized direct work with the Corps and the Congress to secure adequate flood protection for the Fresno-Clovis metropolitan area.

In an effort to ensure the availability of lands needed for the required flood control structures, the County of Fresno, acting jointly with the Flood Control District in 1974, effected open-space and conservation zoning of approximately 500 acres. In addition, the Cities of Clovis and Fresno, the County of Fresno, and the Flood Control District, signed contracts providing advanced funding to acquire the necessary project lands.

Relatedly, the California Water Commission has historically supported and continues to support the project. In addition, the State Reclamation Board submitted a supporting letter of intent for local assurances. Further, the California Legislature enacted and the Governor signed legislation authorizing State support of and financial participation in the project.

At the local level, a broadly based Citizens Project Advisory Committee was created by the Flood Control District. The Committee and the sixteen community organizations and agencies it represented reviewed and confirmed the projects need and design. The committee has also structured a financing plan to ensure the availability of the required local cost share and the equitable distribution of those costs.

Environmental considerations

The federal project Environmental Impact Statement was finalized in July 1980 following a public hearing held in the project area by the Local Sponsor and the U.S. Army Corps of Engineers. Testimony submitted during the hearing indicated there were no areas of controversy associated with the project or its limited environmental impact. In summary, the testimony confirmed the accuracy of the Draft Environmental Impact Statement in identifying only limited impacts and the adequacy of the proposed mitigation measures.

In addition to the 1980 federal EIS, the Local Sponsor prepared a complete environmental impact report, dated July 1985, pursuant to the California Environmental Quality Act. That EIR and related subsequent reviews, including a supplemental environmental assessment, support the previous findings, further indicating one project component will directly benefit the cleanup of a downstream agricultural chemical plant. Final construction design of the unit has been coordinated among state, local and federal interests to maximize those benefits.

It is confirmed any adverse environmental impact which might be associated with the project would occur during the brief construction period. However, such impacts would be of a temporary nature and insignificant when compared with the permanent environmental and social benefits to be derived.

The congressional authorization of the project mandated that "The project shall include measures determined appropriate by the Secretary to minimize adverse effects on groundwater and to maximize benefits to groundwater, including groundwater recharge." The Corps of Engineers and the Flood Control District are now examining supplemental design investigations to address this congressional mandate. It is the goal of these investigations to identify means of achieving the congressional objective without further federal costs or need for substantive structural modification of the project features.

Project feasibility and financing

The completed project report, supplemented by additional engineering detail, substantiates the need for the project and identifies strong economic justification. The project costs and benefits, adjusted from the General Design Memorandum are as follows:

Total first costs (1993)	$66,000,000
Average annual costs (8⅝%)	[1]5,907,000
Total average annual benefits:	
Flood control	8,884,125
Flood proofing cost reduction	567,075
Total average annual benefits	[1]9,451,200

Benefit/cost ratio, 1.6 to 1.0[2].

[1] Estimates based on 1993 construction cost estimates.

[2] Corps has not updated benefits computation since GDM (1985). Local sponsor estimates indicate 1993 B/C ratio of 1.9/1.0.

Noteworthy is the fact the project is economically justified on the basis of flood damage reduction benefits alone. While other benefits are generated, they are not needed to produce a positive benefit/cost ratio. It should be noted that, while not included in the actual benefit calculations, the proposed project will create significant beneficial effects in the areas of water conservation, groundwater management, wildlife enhancement and recreation.

The distribution of the project costs, based on the current cost-sharing requirements, is as follows:

Federal Government (Public Law 99–662)	$48,600,000
State of California (SB 502)	12,180,000
Fresno Metropolitan Flood Control District (AB 2113) plus annual O&M and replacement	5,220,000
Total project cost (1993)	66,000,000

Project cost savings

It is significant to note the Corps of Engineers and the local sponsor have focused efforts in maximizing project design and construction efficiency. These efforts have led to certain structural reductions and construction coordination which produced a significant reduction in originally estimated project costs.

Authorized maximum cost (October 1993)	$119,700,000
Current approved estimate (fiscal year 1993)	66,000,000
Projected project cost savings	53,700,000

While each of the project units meets a separate benefit/cost test, each of the units is interdependent as to hydrological operation and construction and the savings noted above are not fully achievable without the integrated construction and operation of all project units.

Project status review

Subsequent to the submission of the project report to the Congress as House Document 98–147 in January 1984, much has been accomplished. Congressional enactment of PL 99–662 effected final project construction authorization, inclusive of flood control, recreation and water conservation purposes. The LCA was executed in a formal ceremony on August 1, 1987 and the first construction expenditures were approved by the President and the Congress in fiscal year 1987.

In fiscal year 1993 the last year of construction expenditure is scheduled. The construction activity completed to date, has produced immediate flood protection benefits to the Friant-Kern Canal of the Bureau of Reclamations important Central Valley Project. In addition, the completion of the Redbank Creek Detention basin and the Fancher Creek Dam has provided flood protection in areas near Fresno Air Terminal and in the southeast residential areas so badly flooded in 1969. The Presidents 1993–94 budget proposes final construction funding in the amount of $500,000. This work will complete construction of the Big Dry Creek unit which includes Big Dry Creek Dam, Pup Creek Basin and the Alluvial Drain Basin. This unit will complete the project and provide the design flood protection to the balance of the Fresno-Clovis metropolitan area and the extensive agricultural irrigation canal system of the area.

In coordination with the Governments project schedule, the Flood Control District implemented the local project funding mechanisms in 1987–88, accumulating the funds required pursuant to the cost-sharing requirements. The first local payments were made to the Government in 1987. Relatedly, land acquisitions required for all phases of the project are now in excess of 90 percent complete. To date the Local Sponsor has expended $15,000,000 in compliance with its LCA obligations to the Government.

Conclusion: Request for appropriation

On June 13, 1992, thirty-six years had elapsed since Congress first authorized the proposed Redbank-Fancher Creeks Flood Control Project modification to the Fresno County Streams Project. The need for the project has been identified in a total of eight different studies and investigations performed at both the local and federal levels. The feasibility investigation confirmed the project need and identified strong economic justification for construction. Further, the more advanced and detailed technical analysis associated with the completed General Design Memorandum confirmed the projects need, economic strength, the previous recommendations of the Corps and the requests of the local community.

Because it is our belief the Redbank-Fancher Creeks Flood Control Project has met all requirements for federal participation and meets all current standards of economic justification and environmental protection, we most respectfully urge favorable action by the Committee and the Congress in appropriating final construction funding for the Redbank-Fancher Creeks Flood Control Project.

STATEMENT OF JAY ANDERSON, SECRETARY, MERCED COUNTY STREAMS GROUP

Mr. HILL. Mr. Jay Anderson, a relative newcomer has testified for about 17 years. [Laughter.]

Mr. ANDERSON. Thank you, Clair.

Mr. Chairman and Senator Feinstein, I take this opportunity to visit you for the 20th year.

I am representing the Merced County Board of Supervisors, the local sponsors of the Merced County streams project. With me today is Mr. Ross Rogers, the general manager of the Merced Irrigation District, a local sponsor.

We ask your continued support of the Merced County streams project, which is the construction of two dry dams, enlargement of a flood control dam, and about 35 miles of channel work. The first phase of this project was completed last year. I notice in my testimony there is a typo.

In the fourth paragraph, it says, "* * * completed under cost."

That is completed under budget, ahead of schedule, without a lost time accident. This is due to the close cooperation of the local sponsors and the Corps of Engineers.

During the heavy rains in California in January, we saw widespread flooding within the project area. And only the quick work of maintenance crews from the Merced Irrigation District and over 100 airmen from Castle Air Force Base working around the clock for 24 hours averted a major disaster on the eastern side of Merced County.

The committee in the past years has been very cooperative with us in this project. We ask your continued cooperation and ask you to include my complete statement in the record.

Thank you very much.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF JAY ANDERSON

Mr. Chairman and members of the committee, my name is Jay Anderson of Merced, California. I am representing the County of Merced which, together with the State of California, is the sponsor of the Merced County Streams Project. The County is joined by the Merced Irrigation District, the City of Merced, the El Nido Irrigation District and the Le Grand Athlone Water District.

Federal authorization for project construction was granted as part of the Supplemental Appropriations Act of 1985. Authorized project facilities include constructing dry dams on Canal (Castle Dam) and Black Rascal Creeks (Haystack Mt. Dam), enlargement of the existing Bear Creek Dam, and modification of levees and channels along approximately 33.4 miles of Fahrens, Black Rascal, Cottonwood, and Bear Creeks. The completed project will provide flood protection worth more than $8,000,000 per annum to 263,000 acres of urban and agricultural lands. Total project cost is currently estimated to be $112,300,000, of which $36,200,000, or roughly 32 percent, will be paid during construction by the local beneficiaries.

When completed, 110,000 residents occupying 36,000 housing units within the greater metropolitan Merced area will live with assurance of 125-year flood protection, while the lower rural area will receive 25-year protection. Castle Air Force Base will also benefit through the establishment of a storm run-off discharge capability in adjacent streams.

The first component of the project, Castle Dam, was completed in 1992, with the exception of a check structure in the Merced Irrigation District main canal. This component was constructed under cost, ahead of schedule, and without a lost time accident. We look forward to the transfer of operational responsibility within the next year.

As a result of a request by the County, the Corps has reevaluated project components and will extend the boundaries of the levee and channel portion of the project to better match growth that has taken place in the City of Merced. This willingness to remain flexible throughout the lengthy planning and design process is also a credit to the Corps and its staff.

The Merced County Streams Project is a modification and expansion of an earlier flood project constructed between 1948 and 1957. It has undergone considerable review and modification since first authorized as part of the Flood Control Act of 1970. Approximately $10,500,000 has been spent to date on the Merced County Streams Project. This has been matched by local contributions of approximately $3,000,000. Working together as partners in financing the construction of this project, we have worked closely with the Corps to establish an economic balance between benefits and costs. As a result of this combined effort, non-essential project components were first scaled back and eventually eliminated. This scaling to fit the economic reality resulted in substantial federal and local savings.

In January of this year Merced County received rains of heavy intensity. Considerable flooding occurred within the project area. Bear Creek overflowed its banks one mile southwest of Merced, and Mariposa Creek broke its banks approximately four miles southeast of Merced. Quick action by maintenance crews from the Merced Irrigation District, assisted by airmen from Castle Air Force Base, working around the clock for two days and nights, averted a major disaster.

The project has the support of state and local authorities and funding of the non-federal portion has been addressed.

We request your committees support for inclusion of $1,100,000 in the fiscal year 1993/94 budget as recommended by the California Water Commission, the Corps of Engineers, and the Presidents budget. The allocation of this amount will allow for orderly progress of the Merced County Streams Project, which is so vital to the community, state and the nation.

SANTA ANA RIVER MAINSTEM FLOOD CONTROL PROJECT

STATEMENT OF KAY CENICEROS, CHAIRMAN, BOARD OF SUPERVISORS, RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Mr. HILL. All right, our next witness is Kay Ceniceros.

Ms. CENICEROS. Thank you.

I am Kay Ceniceros, chairman of the board of supervisors of Riverside County Flood Control. Mr. Chairman and Senator Feinstein, I appreciate the opportunity to speak to you briefly about three projects important to our area. They are more detailed in our written testimony.

The first of them is the Santa Ana River mainstem project, which is a cooperative program serving three counties and millions of people. We are in a multiple-year phase of this project.

We have started on the Seven Oaks Dam, the lower Santa Ana River, and the Oak Street drain in our county, as well as being near completion of the Mill Creek Dam in San Bernardino County.

This is a vital program, serving about 6 million people with protection in southern California. We would like to see an additional appropriation of $100 million for this project.

The other two projects are much smaller projects within our county. One is the protection of homes within the city of Norco on the Norco Bluff, which are in imminent danger of being lost due to impingement by the Santa Ana River at the base of the bluffs. We are seeking $150,000 to continue developing a feasible program for saving these homes.

The last project is the Lake Elsinore project, which has been a local program. We are requesting support of Congress in increasing the limit of Federal participation.

While we are well into this program, delays have caused an increase in the total value. And we would like to share that cost with Congress and would appreciate your consideration for that item.

All of these programs are more detailed in our written testimony. And I invite your consideration and appreciate your efforts.

Thank you.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF KAY CENICEROS

Summary recommendations

Santa Ana River—mainstem, construction—general, $100,000,000; Santa Ana River—Norco Bluffs, feasibility study, $150,000; and Lake Elsinore, CA, small flood control project, increase small project limits to $8,000,000.

Santa Ana River—Mainstem

The Water Resources Development Act of 1986 (Public Law 99–662) authorized the Santa Ana River—All River project which includes improvements along the river in Orange County, enlargement of Prado Dam and Reservoir near Corona, California, construction of a new dam (Seven Oaks) near the entrance to Santa Ana Canyon, improvement of the Oak Street Drain Channel in Corona, California, improvement of Santiago Creek in Orange County and various mitigation features as set forth in the Chief of Engineers' Report to the Secretary of the Army. The Boards of Supervisors of Orange, Riverside and San Bernardino Counties are in support of this needed project and have so stated in past resolutions to Congress.

The Local Cooperation Agreement (LCA) was signed in December 1989 by the three local sponsors and the Army. Construction started on the Seven Oaks Dam in the Spring of 1990. This project element will take about seven years to complete. Acquisition has been completed on enhancement lands near the mouth of the river channel and the local sponsors have acquired lands, easements, rights of way and disposal areas for Seven Oaks Dam and commenced acquisition for other elements of the project. Construction has started on the Oak Street Drain element and the Mill Creek element has been completed. Construction work has started on the lower Santa Ana River Channel. In order to keep this important project on schedule an appropriation of 100 million dollars will be required.

We request 100 million dollars to continue this important project and urge the Committee to approve this amount of funding in the fiscal year 1994 appropriations.

Santa Ana River at Norco Bluffs

The Santa Ana River passes along the northerly border of the City of Norco. Norco is situated on a bluff that forms the left bank of the river. The bluff varies in height from 46 to 96 feet above the streambed.

The floods of January and February 1969 along the Santa Ana River caused impingement of the river bank, undermining the toe of the slope causing sloughing of the bank. Approximately 50 to 60 feet of the bluff retreated to the south. No improvements were lost at that time but the threat to improvements from future river actions became apparent. The floods of 1978 and 1980 impinged further, causing another 30 to 40 feet of retreat of the bluff. One single family residence was undermined and destroyed because of this damage.

A provision in the Water Resources Development Act of 1990, PL 101–640, directed the Secretary of the Army to conduct a study of the feasibility of improvements along the Santa Ana River at Norco Bluffs to prevent further damage to the bluffs by the river.

We anticipate the Corps finding sufficient justification of feasibility in their reconnaissance studies to proceed with a cost sharing agreement with the local sponsor for a feasibility study to be commenced during the Summer of 1993. The total feasibility study costs are estimated to be 1 million dollars. Congress appropriated $200,000 in fiscal year 1993 to start this study. We are requesting Congress to appropriate $150,000 in fiscal year 1994 to provide sufficient Federal funding along with an equal share of funding from the local sponsor to continue the feasibility study through FY 1994. The Riverside County Flood Control and Water Conservation District is prepared to fund its share of the cost of the feasibility study.

We request the Committee to appropriate $150,000 in fiscal year 1994 to continue the feasibility study of the Santa Ana River at Norco Bluffs at Norco, California.

Lake Elsinore, CA

The Corps of Engineers will be starting construction of the Lake Elsinore Outflow Channel in July 1993. This important project will control flood levels around the perimeter of Lake Elsinore and through the City of Lake Elsinore along the outflow channel. This project is being funded as a small flood control project under the Chief of Engineers continuing authority program, which has a 5 million dollar Federal participation limit. When the feasibility study was initiated in 1986, the total costs were estimated to be less than 10 million dollars. Through various problems and delays encountered in the Corps getting the project ready for construction, the costs have escalated to 16 million dollars. We are requesting your committee to direct the Secretary of the Army, acting through the Chief of Engineers, to revise the Local Cooperation Agreement (LCA) for the Lake Elsinore, California flood control project entered into on March 27, 1992 to provide that the maximum which may be allotted under Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s) for such project shall be $8,000,000 instead of $5,000,000. Nothing in this language shall change the cost sharing requirements applicable to the project under the Water Resources Development Act of 1986.

FLOOD CONTROL AND WATER CONSERVATION DISTRICT BOARD SUBMITTAL
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

FROM: Chief Engineer **SUBMITTAL DATE:** March 16, 1993

SUBJECT: Resolution No. F93-9
Supporting Federal Appropriations
for Federal Flood Control Projects

RECOMMENDED MOTION:

Approve Resolution No. F93-9.

JUSTIFICATION:

This resolution supports the District's request of the House and Senate Appropriations Committees for appropriations for Federal flood control projects in Fiscal Year 1994.

FINANCIAL:

These appropriations, if approved, will provide substantial economic benefits to the citizens of Riverside County.

Kenneth L. Edwards
KENNETH L. EDWARDS
General Manager-Chief Engineer

MINUTES OF THE FLOOD CONTROL & WATER CONSERVATION DISTRICT BOARD

On motion of Supervisor Larson, seconded by Supervisor Younglove and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Buster, Dunlap, Ceniceros, Larson and Younglove
Noes: None
Absent: None
Date: March 16, 1993
xc: Flood Control

Gerald A. Maloney
Clerk of the Board
BY:
Deputy

Prev. Agn. ref. Depts. Comments Dist. ALL AGENDA NO. 9.3

BOARD OF SUPERVISORS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RESOLUTION NO. F93-9

SUPPORTING FEDERAL APPROPRIATIONS FOR FLOOD CONTROL PROJECTS FOR FISCAL YEAR 1994

WHEREAS, the United States House of Representatives Committee on Appropriations, Sub-Committee on Energy and Water Development, and the United States Senate Committee on Appropriations, Sub-Committee on Energy and Water Development are holding hearings on March 24, 1993 to consider appropriations for Flood Control and Reclamation Projects in California for Fiscal Year 1994; and

WHEREAS, the Riverside County Flood Control and Water Conservation District (District) supports the continuation of construction of the Santa Ana River Mainstem project and the commencement of the feasibility studies of the flooding and bank destruction along the Santa Ana River at Norco bluffs, California; and

WHEREAS, the District is the local sponsor for the construction of a small flood control project at Lake Elsinore, California, to be constructed by the Army Corps of Engineers, with said project estimated costs escalating dramatically from less than 10 million dollars to 16 million dollars; now, therefore,

BE IT RESOLVED by the Board of Supervisors of the Riverside County Flood Control and Water Conservation District in regular session assembled on March 16, 1993, that they support appropriations by Congress for Fiscal Year 1994 for the following projects:

U.S. ARMY CORPS OF ENGINEERS

General Investigations and Surveys Santa An River at Norco Bluffs	$150,000
Construction - General Santa Ana River Mainstem	$100,000,000

BE IT FURTHER RESOLVED that the Board of Supervisors of the Riverside County Flood Control and Water Conservation District requests the Congress to direct the Secretary of the Army, acting through the Chief of Engineers, to revise the local cooperation agreement under Section 221 of the Flood Control Act of 1970 for the Lake Elsinore, California flood control project entered into on March 27, 1992 to provide that the maximum amount which may be allocated under Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s) for such project shall be $8,000,000 instead of $5,000,000 with the cost sharing requirement applicable to the project shall be as set forth in the Water Resources Development Act of 1986.

BE IN FURTHER RESOLVED that the General Manager-Chief Engineer is directed to distribute certified copies of this resoloution to the Secretary of the Army, Members of the House of Representatives' Committee on Appropriations and Sub-Committee on Energy and Water

Development and the Senate's Committe on Appropriations and Sub-Committee on Energy and Water Development.

Roll Call resulted as follows:

Ayes: Buster, Dunlap, Ceniceros, Larson and Younglove
Noes: None
Absent: None

The foregoing is certified to be a true copy of a
resolution duly adopted [illegible] said Board of Super-
visors on the date [illegible] set forth.
GERALD A. MAL[illegible] Clerk of said Board
By ______ Deputy

STATEMENT OF KENNETH MILLER, DIRECTOR, DEPARTMENT OF TRANSPORTATION AND FLOOD CONTROL, COUNTY OF SAN BERNARDINO

Mr. HILL. Kenneth Miller.

Mr. MILLER. Mr. Chairman and Senator Feinstein, I appreciate the opportunity to give testimony again on some needed flood control and water conservation projects in San Bernardino County.

The project that continues to be the highest priority for us is the Santa Ana River mainstem project, as well as in our neighboring counties of Riverside and Orange.

This winter's rainstorms have again given us a reminder that this river can cause destruction when two major roadways crossing the river were destroyed during the winter storms, including a multispanned bridge in the city of Redlands.

I am pleased to report that the construction on the project, which started in 1990, is moving ahead on schedule and within all of the budgetary limitations.

Two additional Corps of Engineers projects for which we are asking your support are the Seven Oaks Dam water conservation feasibility study, and this is a project to enhance water resources in our region; and also initiation of a reconnaissance study for the Mission Zanja Creek's flood protection system.

In addition, we would like your continued support of the Bureau of Reclamations Small Watershed Project Loan Program.

I thank you very much.

[The statement follows:]

STATEMENT OF KENNETH MILLER

Dear Chairman Johnston:

The Board of Supervisors of the San Bernardino County Flood Control District, State of California, appreciates this opportunity to submit these most critical flood control and water conservation project proposals for consideration in the FY 1994 budget:

Corps of Engineers

Santa Ana River Mainstem - Estimated budget requirement for FY 1994 is $100,000,000. Includes Seven Oaks Dam, San Timoteo Creek, Oak Street Drain and Santiago Creek. Your support of funding will continue design and construction of important flood protection works for residents of San Bernardino, Orange and Riverside Counties. Construction commenced during FY 1990 and is progressing within schedule and budget.

Seven Oaks Dam Water Conservation - Estimated budget requirement is $150,000. A reconnaissance study was completed during FY 1993 to initiate a Feasibility Study for FY 1994. Local funding for the study has been committed.

Mission Zanja Creek - Estimated budget requirement is $341,100 to initiate a reconnaissance study for a major watershed that often floods within the Cities of Redlands and San Bernardino and the County.

Bureau of Reclamation - (PL 84-984, Small Watershed Project Loan Program)

San Sevaine Creek Water Project - Key features of the project are environmental enhancements, increased flood protection and annual water conservation for the Cities of Rancho Cucamonga and Fontana and the County. The State Water Commission recommended funding in the amount of $1,000,000 for an initial construction start.

The Board is proud to announce that Mill Creek Levee, one of the features of the Santa Ana River Mainstem Project, was completed this past year. Once again, the Board wishes to express its deep appreciation for your past and present support of these priority programs in San Bernardino County.

SANTA ANA RIVER MAINSTEM PROJECT

Project Description:

The Santa Ana River Project includes seven interdependent features. Mill Creek Levee and Reaches 1 and 10 of the Lower Santa Ana River are complete. Additionally, the completion of Seven Oaks Dam, San Timoteo Creek, Prado Dam, Oak Street Drain, Santiago Creek and the Lower Santa Ana river features will provide (a) the necessary flood protection from the standard project overflow within Orange, Riverside and San Bernardino Counties; (b) enhancement and preservation of marshlands and wetlands for endangered waterfowl, fish and wildlife species; (c) recreation amenities; and (d) flood plain management of the 30 miles of Santa Ana River between Seven Oaks Dam and Prado Dam. The mainstem project is scheduled for completion by the year 2001.

San Bernardino County Features Status:

Seven Oaks Dam: Intake structure excavation and right abutment stripping is complete. Currently, the Outlet Works/Diversion Tunnel contract is 60% complete. Advertisement for Bid on Embankment and Spillway construction is scheduled for March 1993.

Mill Creek Levee: Project was completed in April 1992.

San Timoteo Creek: Final design, plans, and specifications to be completed by September 1993.

Seven Oaks Dam Water Conservation Study: Reconnaissance investigation is complete. A determination was made to pursue water conservation for Seven Oaks Dam in a feasibility study to identify water conservation alternatives within the proposed Seven Oaks Dam design. President's budget for FY 1993/94 includes $150,000 for this new work.

Funding Required:

To continue construction of the mainstem project in Fiscal Year 1993/94, the Corps of Engineers will require $100,000,000 in federal funding along with cash contributions of $7,900,000, lands, and various services from local sponsors.

The State of California Water Commission voted continued support of this project on March 10, 1993.

PROJECT AUTHORIZED:	Public Law 94-587, Section 109, Approved October 22, 1976 Public Law 99-662, Water Resources Development Act of 1986
TOTAL PROJECT COST:	$1.4 billion - Includes $473 million local share
STATE OF CALIFORNIA WATER COMMISSION RECOMMENDATION Fiscal Year 1993/94:	$100,000,000
ESTIMATED BUDGET REQUIREMENT Fiscal Year 1993/94:	$100,000,000

REQUESTED ACTION:

1. **Approval of $100,000,000 for Santa Ana River Mainstem by Appropriation Committees and Congress**
2. **Approval of $150,000 for Seven Oaks Dam Water Conservation Feasibility Study**

MISSION ZANJA CREEK RECONNAISSANCE STUDY

Project Description:

Mission Zanja Creek, also known as the Mill Creek Zanja and Mission Storm Drain, was originally built by native American Indians under the direction of Franciscan Padres as a ditch for water supply in 1819. The water diverted from Mill Creek supported the San Bernardino Asistencia and surrounding farms and ranches. The 12-mile-long ditch, which terminates at the Santa Ana River, essentially follows the same course today that the Indians carved out over 170 years ago. As the area has developed and the water supply technology changed, the use of the Zanja has changed from water supply to flood control and drainage channel.

Flows in Mission Zanja Creek originate in the Crafton Hills east of Redlands, and traverse westerly through the cities of Redlands, Loma Linda, and San Bernardino to the Santa Ana River. The drainage basin is shaped like a half circle with a length of about 12 miles and an average width of about three miles. The total drainage area is approximately 25 square miles. The drainage divide is well defined on the southern portion of the basin. The divide between the Mission Zanja and Mill Creeks, however, is on an extensive alluvial fan and the boundary is not well defined and has been altered after extremely large floods.

Planned Reconnaissance Study:

The study, already underway, will consider the past work performed by the Corps of Engineers and expand on that effort to include the many small canyons that drain from the wester slopes of the Crafton Hills. The lower end of the drainage area, from west of Redlands to the confluence of Mission Zanja with the Santa Ana River, will also be evaluated.

Damage from past storms has occurred from relatively moderate storms, which has resulted in flash-flooding of the downtown business district and many residences in the lower lying areas along the creek route. These floods have caused over $4.3 million in damage.

The study would greatly benefit the communities surrounding Mission Zanja Creek, enhance the understanding for future design of flood control improvements, and determine the potential for future federal funding by the U.S. Army Corps of Engineers.

Funding Required:

To complete the reconnaissance study, the Corps of Engineers will require $265,000 in federal funding and $76,000 to initiate a feasibility phase study. The California Water Commission voted for support of this project on March 10, 1993.

To Complete Reconnaissance Study	$265,000
To Initiate Feasibility Study	$ 76,000
TOTAL STUDY COST:	$341,000
STATE OF CALIFORNIA WATER COMMISSION RECOMMENDATION Fiscal Year 1993/94:	$341,000
ESTIMATED BUDGET REQUIREMENT Fiscal Year 1993/94:	$341,000

REQUESTED ACTION: **Approval of $341,000 for the Mission Zanja Creek Reconnaissance Study and to initiate the Mission Zanja Feasibility Study.**

SAN SEVAINE CREEK WATER PROJECT

Project Description

The San Sevaine Creek Water Project is a proposed Bureau of Reclamation "Small Project" under PL 84-984. The project, as proposed, will provide environmental enhancements, water conservation, and flood control facilities in the western portion of the San Bernardino Valley.

Wetland set asides, wildlife corridors, and multi-purpose trails are proposed. In addition, conservation facilities will conserve an estimated 25,000 acre feet of storm water runoff per year into the Chino Groundwater Basin benefitting agricultural, municipal, and industrial water users in the Valley. Presently, the Basin safe yield is in an over-draft condition, which is replenished by importing water from Northern California. This project would improve our environment and help reduce the need for purchasing imported water.

The estimated cost for the Bureau project is $50.0 million, consisting of $33.3 million of Bureau of Reclamation low interest loan and $16.7 million local funding. The project costs are to be repaid to the government by various funding mechanisms supported, but still undetermined, by the Cities of Fontana, Ontario, and Rancho Cucamonga, and the County of San Bernardino. The Cities of Rancho Cucamonga and Fontana and the County of San Bernardino all have development drainage fees in place to help pay for the project.

Project Status:

The Environmental Regulatory Agencies have advised the County that the Environmental Assessment Report (EAR) must be updated. As such, the Loan Application Report (LAR) and EAR are in the process of being revised prior to resubmission. We anticipate these documents to be finalized prior to October 1993 in an effort to start construction during Fiscal Year 1993/94. The County proposes to provide $16.7 million in local funding construction to match the $33.3 million loan from the Bureau of Reclamation.

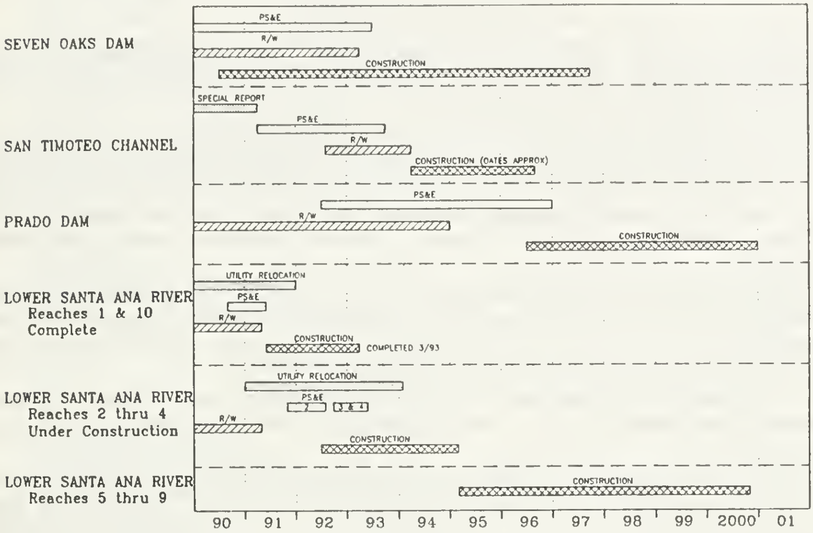
The California Water Commission has consistently supported this project and on March 10, 1993, recommended an appropriation of $1,000,000 be placed in the FY 1994 budget to start federally cost-shared construction on the project.

Although some levee, channel, and interim basin work has been done at various locations on this major drainage system, federal assistance in the form of a Small Project Loan is urgently needed to allow for the construction of major improvements that will provide a fully integrated and functional project. Without these funds it will be many years before local interest can accrue sufficient funds to continue this vital project.

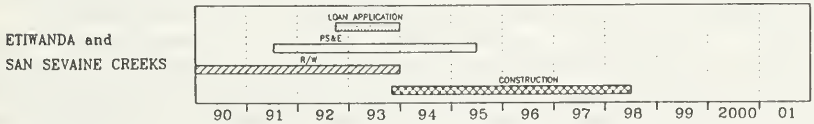
FEDERAL AUTHORITY:	Public Law 84-984, as amended 1956
TOTAL LOCAL CONTRIBUTION:	Approximately $16.7 million
TOTAL FEDERAL CONTRIBUTION:	Approximately $33.3 million
TOTAL PROJECT COST UNDER PL 84-984:	Approximately $50.0 million
STATE OF CALIFORNIA WATER COMMISSION RECOMMENDATION Fiscal Year 1993/94:	$1,000,000 to start federally cost-shared construction on the project
ESTIMATED BUDGET REQUIREMENT:	$1,000,000

REQUESTED ACTION: Add $1 million to recommended FY 1994 federal budget to start federal participation on project.

SANTA ANA RIVER MAINSTEM CONSTRUCTION SCHEDULE



SAN SEVAINE CREEK WATER PROJECT CONSTRUCTION SCHEDULE



SANTA ANA RIVER MAINSTEM FLOOD CONTROL PROJECT

STATEMENT OF HARRIETT WIEDER, CHAIRMAN, BOARD OF SUPERVISORS, ORANGE COUNTY, CA

Mr. HILL. Harriett Wieder.

Ms. WIEDER. Thank you very much, Mr. Chairman.

Senator Feinstein, first of all, let me tell you how very proud we are of you and congratulations.

My name is Harriett Wieder. I am chair of the board of supervisors for the county of Orange in California and a member of the Orange County Flood Control District.

I am here as well to express our appreciation for the prior appropriations by Congress for construction of the Santa Ana River mainstem project and to request your continued support for an appropriation for this coming year sufficient to maintain the project schedule, which is very important.

It is my understanding that $100 million is the approximate amount required. As the first chairman of SARPA, the Santa Ana

River Protection Agency, 18 years ago—I guess you have to have longevity, Mr. Chairman, to be able to work on this project.

I do want to assure you that the board of supervisors is also keenly aware of the seriousness of the flood threat posed by the Santa Ana River, which is the worst potential flood threat west of the Mississippi.

LOCAL COOPERATION

And over the past several years, we have accumulated about $250 million for our share of the $427 million for the project. And I think that is also important.

Since congressional authorization of the project in 1986, Orange County and its partners, San Bernardino and Riverside Counties, have acquired substantial land and performed many relocations as part of their participation by acquiring land for the Seven Oaks Dam, Santa Ana River Channel, as well as the Prado Dam Reservoir.

Orange County itself has spent $125 million to date in the performance of this work in order to enable the Corps to continue construction of the project on schedule and to fully utilize the appropriation requested for the coming year.

I believe, Mr. Chairman, by these actions we have demonstrated our commitment to the successful and timely completion of this project.

And once again, I urge your support of Federal appropriations needed this year to continue the construction of this Santa Ana River mainstem project on schedule so that the citizens of those three major counties of southern California—Orange, Riverside, and San Bernardino—may receive the protection, flood protection benefits as soon as possible, before the gods decree otherwise.

And I would like to acknowledge, also, in support from Orange County is Bill Zaun, who is the public works director for the county of Orange, and George Osborne, who is the present executive director of SARPA. And I think he has been around even longer than me.

So thank you.

Senator JOHNSTON. Thank you.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF HARRIET WIEDER

SUMMARY

This is a request by Orange County, California for your support of the funding required by the U.S. Army Corps of Engineers to maintain the planned construction schedule for the Santa Ana River Mainstem Project during fiscal year 1994.

The U.S. Army Corps of Engineers considers the Santa Ana River to be the most critical flood threat in the west. The most severe flood likely to occur could impact 3 million people, kill 3,000 people and destroy property valued at $15 billion in three urban Southern California Counties.

The Flood Control Districts of Orange, Riverside and San Bernardino Counties, have entered into a Local Cooperation Agreement with the United States Department of the Army to provide a minimum of 25 percent of the total Santa Ana River Mainstem project cost. Local Sponsors' costs are now estimated to equal 34% of the total project cost of $1.45 billion. Orange County's share is about $439 million; to date Orange County has allocated about $255 million to the Project.

Orange County has expended about $124 million toward its responsibilities in providing land and performing relocation's to make way for construction of the Project. Local Sponsors have obtained possession of about 1,550 acres of land for mitigation and 1,500 acres for construction of the new Seven Oaks Dam. A hydroelectric plant and transmission lines impacted by the new dam are being relocated.

The existing Prado Dam will be raised about 28 feet to increase its flood control capacity. Right-of-way engineering is in progress for acquisition of about 1,600 acres for the larger reservoir. This land includes residences, dairies, farming operations, and citrus groves.

Land has been acquired to support the Corps expedited construction schedule to widen the lower Santa Ana River channel. Four bridges have been lengthened to span the widened river. The Talbert Channel ocean outlet has been relocated up coast to make way for widening the Santa Ana River ocean outlet. Ninety-two acres of degraded wetlands at the mouth of the Santa Ana River have been acquired and are being restored to mitigate project impacts and to enhance the habitat for endangered species. Orange County is developing a draft habitat management plan for preservation of open space and wildlife habitat in the Santa Ana Canyon below Prado Dam.

The Local Sponsors are providing cash contributions, acquiring property and performing relocation's to enable the Corps to maintain its construction schedule for fiscal year 1994.

Your support of appropriations for continued construction of the Santa Ana River Mainstem Project is urged to provide citizens of Orange, Riverside and San Bernardino Counties with urgently-needed flood protection as early as possible.

FLOOD POTENTIAL—SANTA ANA RIVER

- —Headwaters in San Bernardino Mountains—75 miles from Pacific Ocean
- —Drains 3,200 square miles in Orange, Riverside and San Bernardino Counties in Southern California.
- —Flows through urban Cities of Colton, Riverside, Norco, Anaheim, Orange, Santa Ana, Fountain Valley, Costa Mesa and Huntington Beach

Floods in Orange County

- —1938, greatest flood of this century, northern half of the County under water; almost all bridges destroyed, serious damage to agricultural land, which is now an urban area.
- —1862, greatest flood on record, approximating the Corps Standard Project Flood

Estimated damage

- —Standard Project Flood would exceed capacity of Prado Dam
- —Levees would be breached; flooding 110,000 acres from Anaheim to the ocean could impact 3 million people, kill 3,000 people and destroy property valued at $15 billion.
- —Major transportation corridors would be interrupted: San Diego, Garden Grove, Santa Ana, Costa Mesa and Orange Freeways, Amtrak Stations and Track
- —Major public facilities would be inundated: Anaheim Convention Center, Angel Stadium, Disneyland, Knotts Berry Farm, Crystal Cathedral, Hospitals, Colleges, Hotels, Shopping Centers and Sanitation Plants

PROJECT DESCRIPTION

The Santa Ana River Mainstem Project is located in Southern California and is comprised of several features located in Riverside, San Bernardino and Orange Counties.

The Seven Oaks Dam, Mill Creek levee and San Timoteo Creek improvements are located in San Bernardino County; Oak Street Drain is located in Riverside County; Prado Dam and Reservoir is located in San Bernardino and Riverside Counties; the Lower Santa Ana River Canyon is located in San Bernardino, Riverside and Orange Counties; and Santiago Creek, Lower Santa Ana River and the Marsh Restoration are located in Orange County. The drainage area primarily overlays San Bernardino and Riverside Counties.

SUMMARY OF WORK BY ORANGE COUNTY FLOOD CONTROL DISTRICT

Since Congressional authorization of the project in 1986, the Orange County Flood Control District as the Local Sponsor has performed or is in the process of performing substantial land acquisition and relocation's as part of its participation. To date, the Orange County Flood Control District has expended about $124 million on the project. This work along with the Government (Corps) work is summarized below:

Lower Santa Ana River

The Corps has nearly completed restoration of ninety-two acres of degraded wetlands at the mouth of the SAR: 8 acres for wildlife mitigation and 84 acres to provide enhancement for wildlife resources. The Greenville-Banning Channel has been moved eastward to make room for the widening of the SAR. This channel was reconstructed as a 60-foot wide concrete rectangular channel, 13.5 to 20.5 feet deep to increase its floodwater capacity. Over 1,000,000 cubic yards of sand were removed and deposited near shore on the Newport Beach coastline.

Reach 1 widening will be completed in April 1993. Reach 2 construction continues to the end of 1993. Construction of Reaches 3 & 4 will begin in April 1993, one year ahead of schedule. The Corps is now preparing plans and specifications for Reaches 5 & 6 which may be ready for a construction start in April 1994 (two years ahead of schedule).

Victoria Pond has been moved to the southeast to make room for the relocated Greenville-Banning Channel and is already flourishing with animal, bird and plant life. The Bikeway Bridge just south of Adams Avenue has been lengthened to span the widened Santa Ana River.

The Orange County Flood Control District has been pushing ahead to help the Corps expedite the Lower SAR construction schedule and has acquired over 112 acres of rights-of-way to and arranged for the relocation of over 60 utility lines and 15 oil wells.

The Talbert Channel outlet has been relocated a thousand feet up the coast to provide for a wider SAR outlet without encroaching on existing California Least Term habitat. A new bridge constructed over the relocated Talbert Channel to restore State beach parking is also complete. The District has also initiated preparation of the Santa Ana Canyon Habitat Management Plan and is working with the Corps on development of a recreation plan to increase public use and enjoyment of the Santa Ana River Trail.

The Pacific Coast Highway Bridge, the Hamilton-Victoria Bridge, and Katella Avenue Bridge have been widened to 8 lanes and lengthened to accommodate the widened SAR Replacement of the Harbor Boulevard Bridge and seismic retrofitting of four other bridges is scheduled to begin April 1993.

Seven Oaks Dam

The Corps has completed tests of material at three sites up to 200 feet deep and performed stripping and excavation of about 800,000 cubic yards of material for the left abutment. An 1800-foot pilot tunnel for the outlet works and construction of 6½ miles of haul roads to the dam site have been completed. The area in which the intake tower will be located was excavated and prepared for construction of the intake structure in June 1992. Currently under construction is the Outlet Works/Diversion Tunnel, an 18-foot diameter, 1,600-foot tunnel that will be used for the diversion of stream bed flows during the construction of the embankment. The contract to complete the outlet works and construct the embankment is scheduled for award in the summer 1993.

The Santa Ana River Flood Protection Agency, representing 26 cities and public agencies on the Santa Ana River flood plain in Orange County recommends, requests and urges a Fiscal 1994 appropriation for continuing construction of the Santa Ana River Mainstem project equal to the full Corps of Engineers capability, currently estimated at $100,000,000.

The Congress has previously appropriated these amounts:

Fiscal year	
1990 (to begin construction)	$20,000,000
1991	46,000,000
1992	78,200,000
1993	90,800,000

Using these appropriations, the Corps has made good progress in the project's construction. Beginning at the Pacific Ocean, channel improvements have advanced about 5 miles upstream into Orange County. At the project's upper end, nearly 60-miles from the ocean, Seven Oaks Dam in San Bernardino County is under construction. Near the mid point of the project, lands are being acquired for the enlargement of the existing Prado unit of the project

Despite the advancing construction work, a large part of Orange County is still vulnerable to a large loss of life and property damage in excess of $12 billion from a project flood due, in part, to the deficiency of Prado Dam. The Corps of Engineers completed Prado Dam under the authorization of the Flood Control Act of 1936 and based its design on hydrology available at the time and on assumptions as to future rates of sedimentation and urbanization, all of which later proved inaccurate in the review of the project for the protection of the metropolitan area of Orange County authorized by the Committee on Public Works of the House of Representatives in 1964. Now the Corps predicts future devastating, uncontrolled flow over the dam's spillway into Orange County in place of the previously planned capture of the 100-year and larger floods behind the dam with non-damaging controlled release. It is in the interest of all to remedy this deficiency as soon as possible by using the Corps of Engineers' full capability to the project's completion scheduled for year 2000.

Local Sponsors have acquired possession of 1,536 acres for project mitigation and an additional 1,364 acres for borrow sites, haul roads and dam site. They have also initiated development of a mitigation lands management program to facilitate protection and propagation of endangered species.

The District and the Southern California Edison Company have entered into an agreement for SCE to relocate its hydroelectric power plant and related flume and transmission lines out of the new Seven Oaks Dam reservoir area.

Prado Dam

Orange County Flood Control District has initiated a program for acquisition of about 400 parcels under 260 ownership's. Survey and right-of-way engineering is underway; hardship claim procedures have been established and two hardship properties have been acquired. Ongoing meetings are taking place with landowners, local jurisdictions and private developers. Contracts to provide hazardous materials assessment, appraisal, acquisition and relocation assistance services are currently underway to prepare for a 1997 construction start.

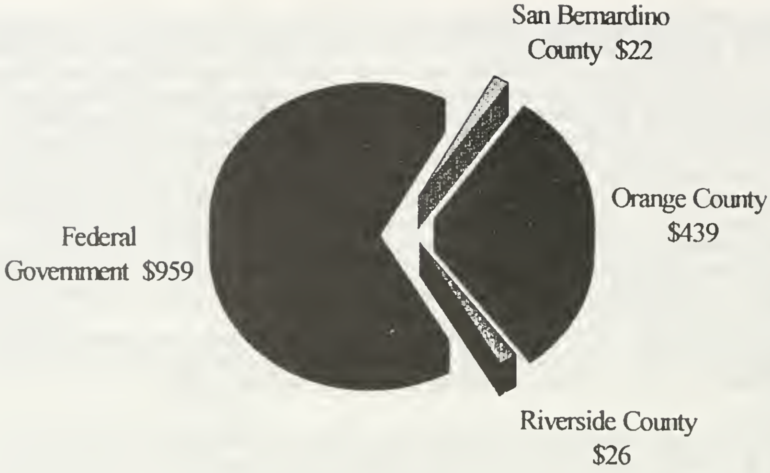
PROJECT COSTS

In 1992, the Corps of Engineers estimated the costs of the SARP for each Feature and, based on the estimated costs of Local Sponsors' responsibilities for each Feature, identified the cost sharing between the Federal Government (2/3) and the Local Sponsors (1/3).

Feature	Orange	Riverside	San Bernardino	Total local
Seven Oaks Dam	$74.3	$4.5	$6.0	$84.8
Mill Creek			$0.195	$0.195
San Timoteo			$14.8	$14.8
Oak Street Drain		$12.0		$12.0
Prado Dam	$256.0			$256.0
Lower Santa Ana River	$99.2	$9.7	$0.7	$109.6
Santiago Creek	$9.3			$9.3
Totals	$438.7	$26.2	$21.6	$486.6
Percent of total	90	5	5	100

These estimates indicate the Orange County Flood Control District will pay 90% of the Local Sponsor's share of the Project.

To date, Orange County has expended about $124 million toward its commitments and has allocated about $255 million to the project.



SANTA ANA RIVER PROJECT COST SHARING
(IN MILLIONS)

In addition to the inability of Prado Dam and Reservoir to contain large floods without uncontrolled spillway discharge, there is reason for concern for the safety of the dam itself. The Corps of Engineers has determined that the existing spillway could not pass a maximum possible flood. While such a flood is a very remote possibility, its occurrence would overtop and destroy Prado Dam with unimaginable damage and desolation in heavily urbanized Orange County below. The reconstruction of Prado Dam as specified for the Santa Ana River Mainstem Project will provide a larger spillway capable of safely passing the maximum possible flood. This spillway deficiency should be corrected as soon as possible.

A third reason for urgency in advancing the construction of the project is that of flood insurance requirements imposed on so many property owners in Orange County on the 100-year flood overflow area identified by the Federal Emergency Management Agency (FEMA). A recent survey revealed annual insurance premiums paid by property owners in Orange County as follows:

City	Annual premiums	Number of policies
Anaheim	$190,785	676
Costa Mesa	522,037	1,449
Fountain Valley	3,157,840	8,692
Garden Grove	1,257,840	3,550
Huntington Beach	4,884,650	13,762
Newport Beach	537,241	1,441
Orange	113,422	321
Santa Ana	4,029,780	11,612
Westminster	1,084,084	3,105
Total	15,782,315	44,608

The Corps of Engineers estimates that, with the completion of Seven Oaks Dam and the advancement of channel improvements from the Ocean to 17th Street in the City of Santa Ana, FEMA flood overflow maps could be changed to eliminate the 100-year flood plain areas, thereby relieving property owners of the necessity for the yearly premiums indicated above. This could be accomplished before the completion of the project and as early as 1997 by utilizing the Corps' full capability.

In summary, Prado Dam can control neither the project flood nor the 100-year flood and is not structurally safe for the maximum possible flood. The dam's inability to control a 100-year flood imposed harsh flood insurance requirements on Orange County property owners. It has been 131 years since the Santa Ana River has produced a 100-year or larger flood. Time is running out, so an appropriation equal to the Corps' Fiscal 1994 capability for continuing construction of the Santa Ana River Mainstem Project is urgently requested.

EASTERN MUNICIPAL WATER DISTRICT LOAN

STATEMENT OF MARION ASHLEY, DIRECTOR, EASTERN MUNICIPAL WATER DISTRICT

Mr. HILL. Marion Ashley.

Mr. ASHLEY. Good afternoon, Mr. Chairman and Senator Feinstein.

My name is Marion Ashley. I am a member of the board of directors of the Eastern Municipal Water District of Riverside County in southern California. I want to thank you for this opportunity to testify before your committee.

Your continued support has enabled us to move forward with construction of a major reclaimed water supply project. This project will provide our region with a valuable alternative water supply, ground water basin recharge, create wetlands, and enhance wildlife habitat through multipurpose greenbelts and environment corridors.

Your favorable consideration of our appropriation request in the amount of $8,636,000 for the 1994 budget will not only bring this project closer to completion, but it will provide nearly 1,000 critical jobs to one of the Nation's highest unemployment areas, now at 15 percent.

Our full testimony has been submitted for the record, and we thank you very much.

Senator JOHNSTON. Thank you.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF MARION V. ASHLEY

The Eastern Municipal Water District (District) has obtained a loan through the United States Bureau of Reclamation (USBR), Small Projects Loan Program Public Law 84–984, entitled "Water Reclamation Facilities". The Project work is expected to cover a period of three (3) years, with a cost of approximately $46,000,000. Financial participation will be in accord with the Loan Guidelines.

The Project is extremely important to the implementation of a new and innovative concept in water management, which will result in water conservation for the District and more importantly will provide 900 potential jobs as well as critical infrastructure facilities. It is the District's understanding that the Project will have a funding appropriation of $8,636,000 in the President's fiscal year 1993–94 budget.

The District will request its Congressional Delegation to make a request for an appropriation for fiscal year 1993–94 budget year in the amount of $8,636,000 to expedite this most critical work, that will: 1. Provide for the restoration of one of the District's most precious commodities, namely, high quality groundwater; 2. Extend the life of a very vital element of our economy, agriculture; 3. Provide for environmental enhancement; 4. Provide important infrastructure facilities; and 5. Create valuable jobs for the local economy.

During the California Water Commission Hearings on March 5, 1993, the Water Commission approved and recommended an appropriation of $8,636,000 for this project to the Congressional Delegation. We respectfully ask for your support of an appropriation in the amount of $8,636,000 in the 1993–94 Fiscal Year Budget.

I plan to be in Washington, D.C. March 16 through March 25, 1993, when your Committee will be holding hearings on the Appropriation Bill, and I respectfully request the opportunity to appear before your Committee in support of this very critical water management project. I am enclosing a summary of the Project which I will describe briefly as part of my testimony at the Hearing.

We, at the District, sincerely appreciate your continued assistance in scheduling the opportunity to appear before your Committee to testify on behalf of the District Project and as part of the California Water Commission presentation.

SMALL RECLAMATION PROJECTS LOAN PROGRAM

Name of project.—Reclaimed Water Facilities Eastern Municipal Water District, San Jacinto, California.

Authorization.—Public Law 84–984—Small Reclamation Project Act.

Location, description, and representation.—The project is located in southwestern Riverside County, California, north of the San Diego County line in the City of Riverside and easterly to the San Jacinto Mountains. The proposed project will provide reclaimed water to 21,502 acres of irrigated lands as well as provide reclaimed water for expansion of three separate wetlands, covering approximately 600 acres. Features include construction of approximately 45 miles of major pipelines, two pumping stations, and a 7 million gallon per day tertiary treatment expansion to reclaim and convey and blend wastewater effluent with potable water to agricultural lands, M&I users, wetland areas, and recreational lakes thus preserving treated potable water that would have been used without the proposed system. Representation for the State of California Congressional districts include: CA–43—Rep. Ken Calvert (R); CA–44—Rep. Al McCandless (R); CA–48—Rep. Ron Packard (R); and Senators Dianne Feinstein (D); Barbara Boxer (D).

Justification.—The project will provide reclaimed water to over 21,000 acres of irrigated land as well as provide reclaimed water for expansion of three separate wetlands, covering approximately 600 acres, thus preserving treated potable water that would have been used without the proposed system. Recycling reclaimed water will also provide other important joint and conjunctive use benefits such as establishment of recreational parks and greenbelts, enhancement of wetlands and wildlife habitat, and the recharge of surplus reclaimed water into underground aquifer systems for water quality enhancement and for future drought (banking) management. This secondary water supply will, through exchange and replacement agreements, free-up limited primary water supplies in order to meet the fast-growing domestic and M&I demands in southern California.

Cost sharing	Federal		Non-Federal	
	Cost	Percent	Cost	Percent
Loan with interest	$13.4	30		
Loan without interest	8.05	18		
Grant	8.05	18		
Local contribution			$15.2	[1] 34
Total	29.5	66	15.2	34

[1] Includes reimbursable interest during construction which is not included in the TEC.

Financial/economic factors: Repayment, 15 years; Loan Factor, 28.2 percent; and B/C Ratio, 2:1

Funding requirements: A. Funding Requirements:

Fiscal year	Budget requests			Capability		
	Federal	Non-Federal	Total	Federal	Non-Federal	Total
1992	$3,054,465	$500,000	$3,554,465			$3,554,465
1993 [1]	5,358,380	2,000,000	7,358,380			7,358,380
1994	8,636,000	2,800,000	11,436,000	$2,000,000	$2,000,000	15,436,000
1995	4,000,000	2,000,000	6,000,000			6,000,000
1996	6,000,000	3,000,000	9,000,000			9,000,000
1997	4,052,155	3,321,400	7,373,555	(52,155)	(1,321,400)	3,373,555

[1] Actual expenditure per Burec records.

Schedule of loan application: Draft, 6–90; final, 1–91; report to commissioner, 01–30–91; and secretarial approval, 05–23–91.

EASTERN MUNICIPAL WATER DISTRICT RECLAIMED WATER FACILITIES PROJECT

STATUS REPORT

The water reclamation system will provide an alternate water supply system, for presently, water-short lands in the District. The enlargement of the water reclamation facilities would decrease the use within the District of our limited imported domestic water supplies.

A major benefit of the project is to provide groundwater basin recharge/replenishment benefit by conveying untreated potable water to a 100 acre recharge basin within an area of the District known as the Little Valley near Bautista Canyon, east of Hemet, California. The recharge of this basin will enhance the declining groundwater supplies of the neighboring communities of Hemet and San Jacinto, California. Additionally, this recharge area will provide environmental enhancement, in the form of wetlands habitat.

The system will provide the enhancement and enlargement of two additional wetland areas. One wetland expansion/creation, approximately 160 acres, is proposed in the general vicinity of the California Fish and Game, San Jacinto Wildlife Refuge. The other wetland expansion/creation is located along the Temescal Creek from Lake Elsinore to the Santa Ana River, encompassing approximately 300 acres. The exact location of the sites will be dependent upon the land acquisition process. The wetlands areas will also function as groundwater recharge areas, so that the water conveyed to these areas will percolate into and replenish the underlying groundwater to basins.

PROJECT DESCRIPTION

The project interfaces with the existing District 38.5 mile reclaimed water pipeline network and two in-line booster stations to irrigate over 21,000 acres. The existing facilities presently are capable of supplying reclaimed water to 8340 acres of irrigated land.

The project will consist of the following facilities: 1. Construction of approximately 45.0 miles of new cement mortar lined and coated steel pipeline ranging in pipe size from 24″ to 54″ in diameter:

Title	*Cost*
A–1, Reach 3	$6,000,000
A–2, Reach 4	15,469,000
A–3, Reach 1	9,000,000

2. Construction of two (2) pumping plants:

Title	*Cost*
A–4, Sun City Pump Station	$2,500,000
A–5, Skiland Pump Station	675,000

3. Creation and construction of approximately 600 acres of wetland enhancement areas:

Title	*Cost*
A–7, Wetlands	$900,000

4. Construction of a 7 MGD advance water treatment facility at the Hemet/San Jacinto Regional Water Reclamation Facility.

Title	*Cost*
A–6, Hemet/San Jacinto Tertiary	$7,142,000

PROJECT BENEFITS

I. Environmental: Water Reclamation, Groundwater Recharge, Wetlands Enhancement and Wildlife Habitat.

II. Economic: Loan Factor—Category 1, Cost Sharing (28%), Early Repayment (15 years), Economic Security and National Security.

ENVIRONMENTAL BENEFITS

Water reclamation.—The project will provide water supply for municipal and industrial purposes. Along the reclaimed water pipeline alignment, numerous parks and greenbelts are proposed for construction within the next five year period. The availability of reclaimed water will allow these facilities to be irrigated with reclaimed water, thereby preserving treated potable water that would have been severely cut back or totally eliminated with the drought shortage.

Groundwater recharge.—The project will convey state project water (untreated potable) and reclaimed water to groundwater recharge basins to enhance the replenishment of the underlying groundwater basin. A networking system of pipes will allow the District the capability to move highly treated reclaimed water to appropriate groundwater basins for recharge. With the extended drought severely cutting back water supplies, the District would be more self-sufficient with such a system in place.

Wetlands enhancement.—The proposed project will provide reclaimed water for expansion/creation of three separate wetlands, covering approximately 600 acres that would not otherwise be possible due to the area's water supply shortage.

Wildlife habitat.—At the San Jacinto Wildlife Reserve of the California Department of Fish and Game, 160 acres of ponds and emergent vegetation are planned, which is particularly for the benefit of waterfowl. Constructed wetlands will be designed to increase biodiversity at the wetland sites.

Project financing and cost

The projects are to be financed by an approved loan, under the auspices of the Bureau of Reclamation, Small Reclamation Project Act, on a cost share basis. This request is to accelerate the planned appropriations of the federal share during the fiscal year. The total project cost for projects A–1 through A–7 is $41,686,000.

Project status

A–1, Reach 3, Design Complete, Manufacture of Pipe 3/93, Construction 4/93
A–2, Reach 4, Design in Progress, Manufacture of Pipe 9/93, Construction 10/93
A–3, Reach 1, Design 3/93, Manufacture of Pipe 10/93, Construction 11/93
A–4, Sun City Pump Station, Design 4/93, Construction 5/94
A–5, Skiland Pump Station, Design 4/93, Construction 5/94
A–6, Hemet/San Jacinto Tertiary, Design 12/92, Construction 4/94
A–7, Wetlands, Design 12/93.

TEMESCAL VALLEY LOAN

STATEMENT OF D. JAMES LAUGHLIN, GENERAL MANAGER, ELSINORE VALLEY MUNICIPAL WATER DISTRICT

Mr. HILL. Our next witness is Mr. Jim Laughlin.

Mr. LAUGHLIN. Mr. Chairman.

Senator Feinstein, it is certainly gratifying to know that we have representation on the Appropriations Committee after all of these years.

I am substituting for the president of my board of directors, Mr. Charles Bryant, who is unable to attend this afternoon.

I am here to discuss, very briefly, the Temescal Valley project, which is in the Elsinore Valley area of Riverside County. It is under the Bureau of Reclamations Small Projects Loan Program.

I would like to point out that certainly the loan programs are very successful from the standpoint that the Government gets their money back with interest.

The project is environmentally sound. It creates jobs in our area where we have 12.8 percent unemployment at the present time.

We have submitted detailed testimony. And not to take up more time by the committee, we would like to have you consider the Water Commissions recommendation for a $1 million appropriation this year.

Thank you very much.

Senator JOHNSTON. Thank you.

Mr. HILL. Thank you. Mr. Neil Cline's paper on the Santa Ana River Watershed Project Authority has already been submitted.

[The statement follows:]

STATEMENT OF CHARLES BRYANT, PRESIDENT, BOARD OF DIRECTORS, ELSINORE VALLEY MUNICIPAL WATER DISTRICT

Mr. Chairman, as President of the Board of Directors of Elsinore Valley Municipal Water District. Lake Elsinore California, I appreciate the opportunity to address the Appropriations Committees regarding the Temescal Valley Project. This public works water project is being sponsored by EVMWD to develop and manage local water resources and to improve the economy of western Riverside County of southern California.

The importance of this project cannot be overstated. It will ensure the ability of the District to meet the growing water requirements of an expanding population in southern California while preserving the existing water resources on which agriculture has relied for over a century. Approximately 6,000 acres of citrus are under production in this area. Much of the crop is exported to trading partners in the Pacific Rim which has a positive effect on the balance of trade with these countries.

The Temescal Valley Project addresses national priorities in several areas. EVMWD and the Temescal Valley Project are in key positions for regional management of water and reclaimed water supplies. Plans by Eastern MWD, located upstream from EVMWD on the San Jacinto River, for construction of a desalter will require a pipeline for the disposal of brine. The Temescal Valley Project will include installation of a brine line in the same pipe trench as the water supply line. The cost of the brine line will be shared with Eastern and Elsinore Valley MWD. All reclaimed water flowing from Eastern MWD will be either used within Elsinore Valley MWD or transported through the Temescal Valley to Prado Reservoir along the Santa Ana River. The Temescal Valley Project will allow Elsinore to contribute to the flows in the Temescal Wash, a significant riparian wetlands which is the habitat of the Least Bell's Vireo, an endangered species of bird. Presently, EVMWD must exercise its water rights to 1000 acre-feet per year of the flows of the Temescal Wash. EVMWD's existing education program can be expanded to include educational programs in nature study as well as collection of data necessary for understanding of natural systems in the area served.

Additionally, the Temescal Valley Project will contribute at least 900,000 manhours of employment at a time when unemployment is estimated at 12.8 percent in the area served.

Project benefits.—Water supply, water quality, conservation, job creation, and education.

Benefit area.—Population, 30,000; agriculture, 6,000 acres; M&I, 4,000 acres; and natural, 2,000 acres.

PROJECT BENEFITS

Water Supply.—The Temescal Valley Project will increase water supply capabilities through a connection with State Water Project. The additional supply capacity of 41 cfs will be used to conserve local groundwater supplies and meet increasing demands.

Water Quality.—State Project Water imported through the Woodcrest Project is of higher quality than other import supplies and some local groundwater. Irrigated agriculture, municipal and industrial, and fish and wildlife will all benefit from the improved water quality.

Irrigated Agriculture.—Agriculture will benefit from the increase in regional supplies as well as the improved water quality. Increasing M&I demands will force the abandonment of over 5,000 acres of orchards without project water supplies. Salt accumulation in the soils resulting from the use of poorer-quality water for irrigation will be leached more effectively using the higher-quality water without increasing irrigation.

Location.—Lake Elsinore, California.

Congressional District.—43rd.

Project purposes.—The Temescal Valley Project will improve EVMWD's ability to service water supply needs in the Temescal Valley. The improvement program will include increased delivery capacity, the rehabilitation or replacement of inefficient wells, 23-million gallons of added storage capacity, and highly efficient operational controls. The rehabilitated system will accommodate additional water supplies from the Woodcrest Project, thus allowing improved management flexibility to meet local conservation and water quality objectives while experiencing increasing demands. Presently, approximately 17,000 acre-feet of water is required to irrigate 6,000 acres of orchards and service 750 residential connections.

Project Facilities.—Pipelines, water storage reservoirs, wells, operations facility.

Cost.—Federal, $23,475,000; local, $10,659,000; total project cost, $34,134,000.

Federal Funding Authority.—Small Reclamation Projects Act, U.S. Bureau of Reclamation.

TEMESCAL VALLEY PROJECT

Background.—The Temescal Valley is located along Interstate 15 between Riverside and San Diego in Riverside County, California. The needs for the project arise from the deteriorated condition of the 50-year-old water supply system and population growth spurred by the recent completion of Interstate 15. The purposes of the project are to rehabilitate the supply system and increase its capacity to meet future demands. The project sponsor, Elsinore Valley Municipal Water District, has initiated final designs to expedite construction and provide some relief from water shortages created by 6 years of continuous drought.

Project features.—Transmission Main (10 mi), Distribution Mains (4 mi), Storage Tanks (23 mgal), Groundwater Wells (3), Operations Facility, and Environmental Monitoring.

Project costs.—Total Project, $34,134,000; Federal Loan, $23,475,000; and Local Share, $10,659,000.

Federal participation.—U.S. Department of the Interior, Bureau of Reclamation, and Lower Colorado Region.

Authorization.—Small Reclamation Projects Act and Public Law 84–984.

Loan repayment.—Repayment Period, 34 Years; and Interest Payment, $25,072,000.

Municipal and Industrial.—Although the project's primary function is to serve agriculture, future M&I service is inevitable. The proposed project facilities are designed to accommodate a population growth of about 27,000 people over the next 45 years.

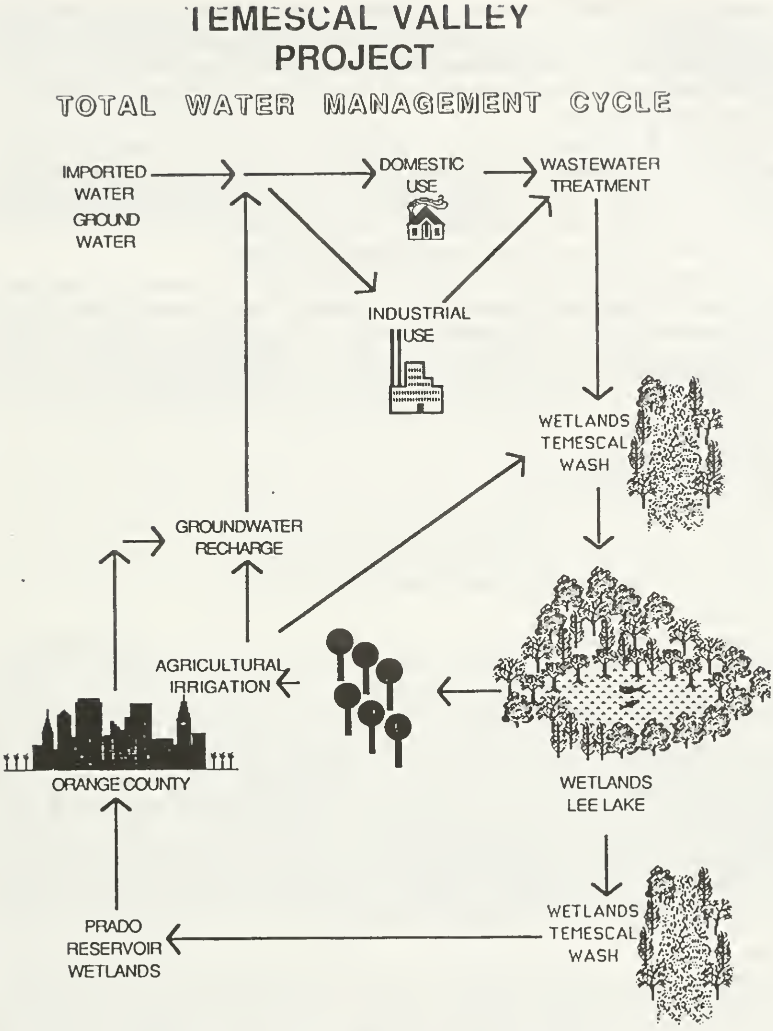
Fish and Wildlife.—The Temescal Wash is a natural drain used by EVMWD for effluent discharge. Riparian habitat along the 20-mile wash is home to a diverse population of plants and animals including state and federally listed endangered species. Competition for existing water supplies will result in the division of wastewater for irrigation and industrial purposes without the project. Effluent stream flows which have enhanced the habitat over the past 15 years would no longer be available to maintain biota or recharge the lower groundwater basin.

The agricultural land use supports over 135,000 trees and provides cover, shelter and water for a variety of wildlife that thrive between the Cleveland National Forest and Temescal Wash.

Conservation.—The additional supply capability will allow the use of State Project Water to offset local production in early years of operation to effect increases in local storage. The stored water will then be available to meet emergency demands in the event of a pipeline failure or drought. These conservation opportunities will extend not only to the Temescal Valley but throughout the EVMWD service area. The proposed project also features conservation elements to reduce conveyance losses and energy requirements.

Job Creation.—Approximately 430,000 man-hours will be required to complete project construction—the equivalent of 225 man-years of employment. An additional 250 man-years will be required in support services and manufacturing, all of which create short-term employment. Long-term employment in the housing construction industry will directly benefit approximately 200 workers on a full-time basis to meet the demand of 150 new homes per year. Other employment such as business construction, manufacturing, and retail and professional services will significantly add to the area's growing economy while maintaining the existing agricultural industry representing a labor force of over 300 people on a full-time basis.

Education.—The Temescal Valley Project affords a diversity of educational opportunities ranging from agriculture and environmental awareness to resource conservation and management. Local farms and riparian areas provide a valuable resource for elementary educational programs in nature study. Modern equipment to collect weather data, monitor water use, and process information will be used to predict demands, calculate consumptive use and groundwater recharge, and identify management opportunities for conservation. The project will complement EVMWD's existing education program.



TEMESCAL VALLEY PROJECT
TOTAL WATER MANAGEMENT CYCLE

GUADALUPE RIVER FLOOD CONTROL PROJECT

STATEMENT OF P. KAY WHITLOCK, FLOOD CONTROL MANAGER, SANTA CLARA VALLEY WATER DISTRICT

Mr. HILL. Our next witness is Kay Whitlock.

Ms. WHITLOCK. Good afternoon, Mr. Chairman and Senator Feinstein.

I am Kay Whitlock. I am the flood control manager at the Santa Clara Valley Water District, which the water district provides water supply and flood control for Santa Clara County.

I am here to speak to you about three projects. The first one is the good news. And that is that with your support last year, there was construction-start money for the Guadalupe River project in San Jose.

That project will protect the City of San Jose and surrounding communities from a one-percent event totalling $520,000,000 damage if that were to occur. Our testimony this year, we are requesting your support to continue that construction of that project at a level of $14.4 million.

The second project we are working on with the Corps of Engineers is the upstream reaches of the Guadalupe River—the upper Guadalupe River flood control project. We are in a cost-share feasibility study. We are requesting your support for $150,000, which will continue and complete that feasibility study.

And the third project is the beginning of construction for a project on Coyote and Berryessa Creeks. That project, in order to get superfund site problems solved, we need to get that project moving as quickly as possible to meet a USEPA deadline. And we are requesting your support of a $4 million construction amount for that project.

Thank you.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF P. KAY WHITLOCK

GUADALUPE RIVER PROJECT

Background

The Guadalupe River is one of the major waterways that flow through the highly developed area of San Jose, California. Historically, the river has flooded the downtown areas of San Jose and Alviso beyond local capability to prevent. For example, estimated damages from a 1 percent, or 100-year flood that would inundate the urban center of San Jose, is $526,560,000. It is estimated that a 50-year flood on this river would cause $233,650,000 worth of damage under existing conditions. The probability of such a flood occurring before implementation of flood prevention measures is quite high. A 50-year flood has an 18 percent chance of occurring during a 10-year period; a 100-year flood has about 10 percent chance of occurring during this same period. There is strong potential, therefore, that a damaging flood will occur before the problem can be resolved. The Guadalupe River had started to overflow its banks in April 1982 and January 1983 before the storms receded and avoided major damage. The Guadalupe River did overbank in February 1986 causing some damage to residences and business in the St. John and Pleasant Street area.

Project synopsis

In 1971, the community requested the Corps of Engineers (Corps) to reactivate its earlier study. The Plan of Study was completed in 1973. The initial problem definition and alternative screening was completed in 1974. More detailed problem definition and alternative studies for the Guadalupe River were completed in 1978. The Stage 2 report was completed for the combined Guadalupe River, Coyote Creek and Baylands. The report at that time established the economic feasibility and federal interest in the Guadalupe River.

In an effort to accelerate the completion of this project, the local community through the Santa Clara Valley Water District has provided a substantial amount of technical and financial assistance since 1972. The Guadalupe River project received authorization for construction under the Water Resources Development Act of 1986. Since that time, the final General Design Memorandum (GDM) was completed in 1992, the local cooperative agreement was executed in March 1992, and construction of the first phase of the project commenced in September 1992. The recommended plan in the GDM includes $14.1 million in incremental costs, that are 100 percent local sponsor responsibility, for modifications to be constructed beyond the flood control improvements that the Corps recommends for federal cost sharing.

The severe flood problem and the ominous threat of future damages has forced the local community to initiate local projects within the Corps project reach and reaches downstream of the Corps limits. In excess of $28 million in local funds has been spent on the planning, design and construction of such improvements to date.

Fiscal year 1993 funding: The 1993 Budget includes $10,000,000 to begin construction. Construction of Contract 1 is underway.

Necessary fiscal year 1994 funding: Funding for the Guadalupe River project during 1994 in the amount of $14.4 million to continue construction is essential to providing critically needed flood protection to the metropolitan area of San Jose and the north San Jose community of Alviso.

Statement of support, Guadalupe River project

Recommendation: Based upon the present high flood risk and potential damage from the Guadalupe River, it is requested that the Committee support $14.4 million to continue construction of the Guadalupe River project.

UPPER GUADALUPE RIVER PROJECT

Background

The Guadalupe River is one of the two major waterways that flow through the highly urbanized area of Santa Clara County, California. Historically, the river has flooded the central district of San Jose and areas south beyond local capability to prevent. For example, the estimated damages from a 1 percent or 100-year flood, which would inundate the urban center of San Jose, is $526,560,000. Damages in the Upper Guadalupe Rivers densely residential floodplain south of Highway 280 would exceed $50 million. The probability of a large flood occurring before implementation of flood prevention measures is quite high. A 50-year flood has an 18 percent chance of occurring during a 10-year period; a 100-year flood has about 10 percent chance of occurring during this same period. There is strong potential, therefore, that a damaging flood will occur before the problem can be resolved. The Upper Guadalupe River near Alma Street had started to overflow its banks in February 1980 before the storm receded and avoided major damage. The Upper Guadalupe River did overbank in March 1982 and again in January 1983 causing damage to several residences and businesses in the Alma Street and Willow Street area.

Study synopsis

In 1971, the community requested the Corps of Engineers (Corps) to reactivate its earlier study. The Plan of Study was completed in 1973. The initial problem definition and alternative screening was completed in 1974. More detailed problem definition and alternative studies for the Guadalupe River were completed in 1978. The 1980 Stage 2 report established the economic feasibility and federal interest in the Guadalupe River only between Highway 880 and Highway 280. In light of flooding in 1982 and 1983, the local sponsors requested that the Corps reopen its study of the Upper Guadalupe River (upstream of Highway 280). The Corps completed a reconnaissance study in November 1989 which established that there was an economically justifiable alternative solution to the flood problem. The report recommended proceeding to the feasibility study phase. A Feasibility Cost-Sharing Agreement (FCSA) was signed by the local sponsor and the Corps on October 16, 1990 and amended in December 1992. The $3.2 million study is scheduled for completion in 1995.

Fiscal year 1993 funding: A feasibility investigation on the Upper Guadalupe River continued in 1993 with funding in the amount of $580,000.

Necessary fiscal year 1994 funding: Funding for the Upper Guadalupe project during 1994 in the amount of $150,000 to continue the feasibility study effort is essential to timely implementation of critically needed flood protection.

Recommendation: Based upon the present high flood risk and potential damage from the Upper Guadalupe River, it is requested that the Committee support $150,000 to continue the feasibility study on the Upper Guadalupe River. Costs of the study are shared equally with the sponsor.

COYOTE/BERRYESSA CREEK PROJECTS

Background

The Coyote and Berryessa Creeks investigation was authorized by Congress in 1941 under the Guadalupe River and Adjacent Streams authority. Coyote Creek is one of the two major waterways that flow through the highly urbanized areas of San Jose, Milpitas and Santa Clara County, California. Berryessa Creek flows through a small portion of San Jose and the growing community of Milpitas. Historically, Coyote Creek has flooded the north San Jose community of Alviso beyond local capability to prevent. Damages on Coyote Creek would be $114 million during the 1 percent event to the north San Jose and Milpitas area. Berryessa Creek would cause $20 million in damage to the homes and industry of Milpitas. The probability of a large flood occurring before implementation of flood prevention measures is quite high. A 50-year flood has an 18 percent chance of occurring during a 10-year period; a 100-year flood has about 10 percent chance of occurring during this same period. There is strong potential, therefore, that a damaging flood will occur before the problem can be resolved. In January 1983, floodwaters escaped from Berryessa Creek and caused damage to several homes and businesses. Coyote Creek has caused the greater damages amounting to several million dollars, overbanking in April 1982 and again in March 1983. Hundreds of people were forced to evacuate their homes where floodwater stood for many days.

Project synopsis

In 1971, the community requested the Corps of Engineers (Corps) to reactivate its earlier Guadalupe River and Adjacent Streams Study which included Coyote Creek. The Plan of Study was completed in 1973. The initial problem definition and alternative screening was completed in 1974. More detailed problem definition and alternative studies were completed in 1978. The third phase, study of freshwater flooding in the Baylands, (which included the lower reaches on Coyote Creek) was completed in 1979. The Stage 2 report could not establish the economic feasibility and federal interest in Coyote Creek. In light of flooding in 1982 and 1983, the Corps refocused its study on Coyote Creek to address the inadequate level of protection provided by unstable levees. Berryessa Creek originally was a Section 205 study but was combined with Coyote Creek when the project cost exceeded the limits of that program.

In an effort to accelerate the completion of this overall program, the local community through the Santa Clara Valley Water District has provided a substantial amount of technical and financial assistance since 1972. Special planning studies have been completed by the District for inclusion into the Corps' studies. The Coyote/Berryessa Creek project received authorization for preconstruction, engineering and design under the Water Resources Development Act of 1986. The project was authorized for construction under the Water Resources Development Act of 1990.

An existing ring levee at Alviso has been designated a Superfund site due to the presence of asbestos. A USEPA consent decree (co-signed by the Corps) requires the removal of the levee by August 31, 1995. The Corps and the community must accelerate completion of the flood control project in order to meet this deadline.

The severe flood problem and the ominous threat of future damages has forced the local community to initiate a local project on Coyote Creek in anticipation of future federal participation. Over $11.7 million has been spent on the planning, design and construction of improvements on Coyote Creek to date, which are planned for augmentation of and incorporation into the federal project. Congress authorized, in the Water Resources Development Act of 1988 (PL 100–676), $3 million in reimbursement to the Water District for construction of flood control measures upstream of the Milpitas Sewage Treatment Plant. The District has completed this work. Negotiations are currently underway with the Corps to provide additional design and construction by the sponsor in order to assist the Corps to meet the USEPA consent decree deadline.

Fiscal year 1993 funding: The 1993 Budget included $866,000 to continue Preconstruction Engineering and Design (PE&D) on Coyote and Berryessa Creeks.

Necessary fiscal year 1994 funding: Construction funding for the Coyote/Berryessa Creek projects during 1994 in the amount of $4 million will be required to initiate federal construction of the Coyote Creek project and complete GDM preparation and design for Berryessa Creek.

Recommendation: Based upon the present high flood risk and potential damage from Coyote and Berryessa Creeks, and the Superfund deadline set by USEPA, it is requested that the Committee support new construction funding in the amount of $4 million to initiate federal construction.

CALIENTE CREEK FLOOD CONTROL PROJECT

STATEMENT OF STUART PYLE, SENIOR ADVISOR, KERN COUNTY WATER AGENCY

Mr. HILL. Stuart Pyle.

Mr. PYLE. Yes; Mr. Chairman and Senator Feinstein, I am Stuart Pyle, consultant of the Kern County Water Agency.

Our statement was submitted for the record by Mary Kay Shell, the supervisor for Kern County. However, her plane schedule did not allow her to be at this afternoon's hearing.

I would just like to point out a couple of things from that statement. We are in the first year of a 5-year, cost-sharing agreement with the Corps of Engineers for a flood control study of Caliente Creek.

This is a followup, second-term study. We went through one study which did not find a feasible project, and we are now looking at a water management program.

We are asking for $300,000 or a number that may be modified by the Corps of Engineers. The thing I would like to point out is that this is a cost-shared program where the County of Kern, through Kern County, the Kern County Water Agency, and Lamont Storm Water District, are contributing about one-half of that amount; meaning that if the Federal Government appropriates $300,000, we will be paying the Corps of Engineers well over $100,000 for direct salaries of their employees.

We will be performing some of the work with our technical people to make up the other portion. I think you will see that there is a critical need to move along with the appropriations to keep this on schedule. We would like to say that we appreciate the support of this committee over the many years.

And I would like to say, Senator Feinstein, that it is not an easy job to be a Senator for a big, diverse State like California. And we really appreciate you sitting here through all of this testimony to see what really goes on in California.

Mr. HILL. Thank you.

Norman Richardson.

SAN CLEMENTE CREEK FLOOD CONTROL PROJECT

STATEMENT OF NORMAN RICHARDSON, COUNCILMAN, TOWN OF CORTE MADERA, CA

Mr. RICHARDSON. Good afternoon, Chairman Johnston, Senator Feinstein.

I am a council member from the town of Corte Madera, which is located on San Francisco Bay seven miles north of the Golden Gate Bridge. It is an ideal physical location and we enjoy a fine living environment along the bay.

Unfortunately, our location is subject to serious flooding. This flooding occurs in the area along San Clemente Creek and is caused by a combination of high tides, storm water runoff, and subsidence of bay mud, which underlies the homes on the bay.

Because of tidal action, this flooding can occur now even in dry weather and is predicted to increase with the passage of time.

In the fiscal year 1991, with the help of our Congresswoman, now Senator Barbara Boxer, the town secured Federal funds for a reconnaissance study of our flooding problem.

The reconnaissance study is now complete and has determined that the area that is subject to flooding contains over 750 structures. In the near future, approximately 550 of these structures will sustain damage as the result of flooding. The value of improvements is over $122 million. The reconnaissance report recommends that the U.S. Army Corps of Engineers conduct a feasibility study to further define the flooding problem and develop a plan for congressional action.

Last year, this committee approved funding to commence a feasibility study, and the town and the Corps have negotiated a cost-sharing agreement and project management plan. The town council has approved the cost-sharing agreement and stated its commitment to pay the full share of all local costs.

This year, the President's 1993 budget includes funds for a second year of the feasibility study. The town of Corte Madera respectfully requests the subcommittee to maintain the fiscal year 1994 budget allocation for the Marin County shoreline and San Clemente Creek feasibility study.

Thank you very much.

Senator JOHNSTON. Thank you.

SAN GABRIEL GROUND WATER CONJUNCTIVE-USE PROJECT

PREPARED STATEMENT SUBMITTED FOR THE RECORD

Mr. HILL. The Metropolitan Water District's statement has already been filed.

[The statement follows:]

STATEMENT OF EDWARD G. MEANS

Thank you for the opportunity to address legislation of considerable importance to California, Section 1614 of the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102–575). That section authorizes the Secretary of Interior to participate in the design, planning, and construction of a conjunctive-use facility designed to improve the water quality in the Main San Gabriel Groundwater Basin and the utilization of the basin as a water storage facility. This project, called the San Gabriel Groundwater Basin Demonstration Project (Project), represents the first multi-use water resources project to combine Superfund groundwater clean-up with water storage enhancement.

The California Water Commission on March 5 unanimously approved the Bureau of Reclamation's (Reclamation) involvement in this Project and recommended inclusion of $5 million in Reclamation's budget for fiscal year 1994.

I would like to describe the need and scope of the project, Metropolitan's commitment to the project, and the importance of the Bureau of Reclamation's participation.

PROJECT NEED

The urbanized coastal zone of Southern California is among the fastest growing areas in the country. It is home to nearly 15 million people and boasts a $300-billion economy. An underpinning of this economic strength, as well as the area's popular living environment, has been—and will continue to be—a dependable water supply in what is otherwise a semiarid climate.

Local supplies, primarily wells, provide for only a third of the region's water needs. The remaining two-thirds is met with water imported through aqueducts. Metropolitan Water District of Southern California imports about half of the region's supply through the Colorado River Aqueduct (CRA) and the State Water Project (SWP). The city of Los Angeles imports lesser amounts through the Los Angeles Aqueducts.

Unfortunately, the water supplies that have supported Southern California's success now face uncertainty. Contamination is present in the area's major groundwater basins, and some wells have had to be closed. Dependable deliveries from the Colorado River are being curtailed as Arizona becomes able to take its full entitlement, and water imported by Los Angeles is under increasing local challenges. At the same time, proposed cutbacks in water allocations from the Sacramento-San Joaquin Delta could have a substantial impact on the Southland's ability to utilize its State Water Project supplies in the future.

In light of these potential shortages, Metropolitan is pursuing, in conjunction with the other water agencies, numerous activities to obtain new water supplies and to implement new water management programs, such as the San Gabriel Demonstration Project, to maximize the use of available water.

The San Gabriel Valley, approximately 170 square miles in area in the central part of Los Angeles County, is home to over 1 million people. The Basin underlies the valley and has historically provided over 90 percent of the drinking water for the residents. Forty-five public and private water agencies extract and distribute approximately 240,000 acre-feet per year of groundwater from the Basin.

However, contamination of groundwater supplies within the Basin by volatile organic compounds (VOC) was first detected in 1979. The Environmental Protection Agency's (EPA) investigation has revealed that a large area of VOC contamination is located in the central part of the Basin in the vicinity of the cities of Irwindale and Baldwin Park. The Basin is now on the Superfund list. In addition, nitrate contamination is pervasive through much of the Basin.

To address the VOC contamination, the EPA is conducting an investigation called the Baldwin Park Operable Unit Feasibility Study. Part of this study is evaluating pumping contaminated water from the Basin and treating it to remove hazardous substances.

PROJECT SCOPE

The Project would be implemented by constructing extraction facilities in contaminated areas of the Basin, treating the water to remove contaminants, and exporting the treated water via Metropolitan's distribution system to meet water demands outside the Basin. Imported water would be stored in the Basin to offset export of extracted water. Studies have indicated that the Basin's drought year production could be expanded by almost 100,000 acre-feet per year without interfering with local use of the Basin. The Project would be constructed in phases in order to assess the treatment technologies and potential effects on local users. The first phase will have a capacity of about 30 million gallons per day, thus, potentially providing over 30,000 acre-feet per year of potable water. Additional expansions of the facilities in subsequent phases are planned to achieve a total capacity of 100 million gallons per day.

METROPOLITAN'S COMMITMENT

Metropolitan has committed substantial resources to the development of this Project. Metropolitan, in cooperation with the local water agencies in the San Gabriel Valley, conducted a feasibility study that serves as the foundation for the Project. The Project would contribute to improving Southern California's water supply situation by preserving the Basin as a source of local supply (and thereby lessening anticipated increases in local demands for imported water from Metropolitan because of the contamination.) It would also improve the efficiency of Metropolitan's existing system by providing water storage capacity in a cost effective and environmentally responsible manner.

In addition, Metropolitan is currently conducting additional hydrogeologic evaluations, preparing an environmental impact report, and conducting bench scale testing for process design at a cost of $2.8 million dollars. This work is scheduled to be completed by August 1, 1993 and will prepare the way for preliminary design and land acquisition. The current work plan has budgeted $8 million for land purchase, $8.0 million for design, $3.5 million for monitoring wells, and $500,000 for additional planning and permitting related activities.

RECLAMATION'S PARTICIPATION

The Project, as envisioned, will combine the technical and financial resources from local, state, and federal agencies including the San Gabriel Basin Water Quality Authority and the California EPA. The estimated total capital cost for the Project is $100 million. Through the Superfund process, EPA is expected to provide funding for approximately 50 percent of this cost of the selected alternative to meet the remedial objectives of removing and containing the contamination. Our goal is to assure a cost effective Project with the expectation that Metropolitan's share of the total cost would be no more than 25 percent. We are asking your support in seeking appropriations for the Bureau of Reclamation's participation for 25 percent of the Project cost. For the fiscal year 1994, Reclamation's commitment of $5 million is essential to assure the progress of this vital Project.

I cannot stress enough the importance of this Project to Southern California. The San Gabriel Basin Demonstration Project will improve Southern California's water supply situation by preserving the Basin as a source of local supply, increasing the efficiency of the existing water supply system through increased water storage capacity, and curtails the continued spread of contamination.

I strongly urge your Committee to provide its financial support to this Project in the Bureau of Reclamation's budget for fiscal year 1994.

CARNEROS CREEK FLOOD CONTROL PROJECT

STATEMENT OF HON. SHEILA LODGE, MAYOR, CITY OF SANTA BARBARA

Mr. HILL. Our next speaker will be Sheila Lodge.

Ms. LODGE. I am back again, this time to urge your continued support of the Carneros Creek project in Santa Barbara County for $600,000 for preconstruction engineering and design.

When Carneros Creek floods, it goes right through our airport terminal, shutting it down. And it also damages local, nearby businesses and industrial and commercial facilities.

I urge your support for funding for this essential work to protect our airport. Thank you.

[The statement follows:]

STATEMENT OF MAYOR SHEILA LODGE

Dear Chairman Johnston, the Santa Barbara County Flood Control and Water Conservation District as local sponsor respectfully requests a $600,000 appropriation in fiscal year 1993–94 to continue the Corps of Engineers Preconstruction, Engineering and Design (PED) for the Carneros Creek Project located in the Goleta vicinity of Santa Barbara County, California.

The Carneros Creek Plan consists of a debris basin and detention basin that would provide flood protection to the Santa Barbara Airport as well as commercial and industrial areas that house high-technology, research and development and data processing firms. In addition, the project will reduce the flooding of and enhance water quality conditions in the Goleta Slough.

The Carneros Creek Plan was a part of a previously authorized project in the Goleta Valley of Santa Barbara County (Goleta and Vicinity, California, 1970). However, the previously authorized project was neither publicly accepted nor economically justified. The results of a re-evaluation study recommended a focused Carneros Creek Plan as an economical solution for providing standard project flood protection.

Because of the significant difference in scope between the previously authorized plan and the recommended Carneros Creek Plan, new authorization was required. Authorization was given for the Carneros Creek Project by modifying the previous project via the Water Resources Development Act of 1992. The total project cost, including PED, is estimated to be $7.5 million.

The Carneros Creek Plan is a result of over 20 years of public involvement and coordination. This project is both needed and supported by the community. As local sponsors, the District requests appropriations in FY 1993–94 to continue the PED effort. Thank you for your consideration of our request.

SAN LUIS REY FLOOD CONTROL PROJECT

STATEMENT OF DICK LYON, MAYOR, CITY OF OCEANSIDE, CA

Mr. HILL. Our next speaker is Dick Lyon.

Mr. LYON. Mr. Chairman and Senator Feinstein, I am back again.

First off, I want to thank you for your continued support of the San Luis Rey Flood project. A little over 2 months ago, I watched that river run wild.

There is no question that without the support of this committee and without the work done by the Army Corps of Engineers, the city of Oceanside would have experienced in excess of $20 million of damage during the recent severe rains.

I am here today to request final phase support from the committee in the amount of about $6.8 million to finish off that project and make sure that our citizens have that protection forever.

Thank you very much.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF DICK LYON

The City of Oceanside requests $6.792 million in continued funding for the San Luis Rey River Flood Control Project in the fiscal year 1994 Federal budget. This funding is needed for completion of Reach 4 of the project, as well as further protective measures in Reaches 2 and 3.

The City of Oceanside is truly grateful to the Committee for your past support of this project. This winter, the San Luis Rey River experienced a flood of 28,000 CFS, which is an estimated 40-year storm. Although the Flood Control Project is not yet complete, the work constructed thus far saved an estimated $20 million in flood damage. Much to the relief of concerned property owners, the Corps of Engineers' partially completed project performed even better than expected. With completion of the project, full protection of the San Luis Rey Valley can be achieved, and damage prevention could reach over $100 million in the event of a standard project flood.

Thank you for your continuing support in fiscal year 1994 as this project nears completion.

AUBURN DAM, CA

STATEMENT OF NICK RUST, COUNCILMAN, CITY OF STOCKTON, CA

Mr. HILL. Nick Rust.

Mr. RUST. Good afternoon, Mr. Chairman and Senator Feinstein. I am from the city of Stockton, a city of about 250,000 people from the San Joaquin County, a city of about—or a county of about one-half million people.

We are here supporting the American River Folsom south optimization study, the Auburn-Folsom South Unit, the Sacramento-San Joaquin delta investigation, and the San Joaquin River resource management initiative.

One of the areas of greatest interest to us, obviously, is the development and use of a multipurpose Auburn Dam, which will provide sources of water for us, which will mitigate some of the requirements that will impact on East Bay and San Francisco water users with the new water requirements.

We suggest that you look kindly upon cooperating with the participating members of the group in the area to develop this dam as soon as possible.

Thank you.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF NICK RUST

Mr. Chairman and Members of the Committee:

The City of Stockton supports the following Corps of Engineers and Bureau of Reclamation water, flood control and fishery projects:

1.	Sacramento-San Joaquin Delta Investigation	$ 900,000
2.	San Joaquin River Mainstream	$ 325,000
3.	American and Sacramento Rivers	Not available
4.	Auburn-Folsom South Unit	Not available
5.	American River Folsom South Optimization Study	Not available
6.	San Joaquin River Resource Management Initiative	Not available

U.S. CORPS OF ENGINEERS

SACRAMENTO-SAN JOAQUIN DELTA INVESTIGATION $ 900,000

This important investigation is being conducted jointly with the California Department of Water Resources. The study will examine alternatives to improve flood control, water supply and environmental concerns such as riparian vegetation and water quality in the Delta. This study is of paramount importance in regard to current and future California Water needs.

SAN JOAQUIN RIVER MAINSTREAM $ 325,000

The City supports the funding of $325,000. This study would address the difficult sedimentation problems experienced along the San Joaquin River flood system, which contributes significantly to flooding and other problems.

AMERICAN AND SACRAMENTO RIVERS

The City of Stockton supports the Corps of Engineers and cooperating local agencies in their combined efforts to eliminate the serious flood threat to the metropolitan Sacramento area. The studies need to provide for development of a much needed water supply from the American River. Any dam that is considered for the American River should be multipurpose. It would be wasteful to construct a flood control only dam when there is such an urgent need for water in San Joaquin County and elsewhere in our State. Stockton should have priority for any new water developed from the project as it has requested American River water from the Bureau of Reclamation in the past and in turn has been denied other sources under the assumption that American River water would be available.

BUREAU OF RECLAMATION

AUBURN-FOLSOM SOUTH UNIT

Tis project is funded only for maintenance of lands acquired for the Auburn Dam and for miscellaneous personnel support. The City of Stockton is concerned that the project is not addressing the water needs of this area as originally intended. The Bureau should be directed to consider the extension of the Folsom South Canal and the provision for water supply for San Joaquin County. We also recommend that the study include the evaluation of various sized multipurpose projects at the Auburn site. To this end, the City requests that the budget be increased from $1,500,000 to $2,250,000 to support these additional investigations.

AMERICAN RIVER FOLSOM SOUTH OPTIMIZATION STUDY

This study could provide an opportunity to gain additional water for the City's watershed. The study will evaluate plans for concurrent surface and groundwater use from existing storage developments and tributary streams to meet Folsom South Area water needs and provide suitable instream flows for fishery and recreation purposes in the lower American River.

SAN JOAQUIN RIVER RESOURCE MANAGEMENT INITIATIVE

This study will look at the potential for integrated operation of the San Joaquin Basin reservoirs, conjunctive use of surface and groundwater, and the rehabilitation of existing conveyance facilities as a means of providing water for fishery restoration and other environmental improvements.

I, FRANCES HONG, do hereby certify as follows:

I am the duly appointed, acting and qualified City Clerk of the City of Stockton, a California municipal corporation; as such City Clerk, I am the custodian of the official records of the City Council of said City; the attached Resolution is a full, true and correct copy of Resolution No. 93-0099 *of said City Council, which was adopted by the City Council, on* March 8, 1993.

IN WITNESS WHEREOF, I have hereto affixed my hand and the seal of the City of Stockton this 9th *day of* March, 1993.

FRANCES HONG
City Clerk of the City of Stockton

By Shirley Ortega *Deputy*

Resolution No. 93-0099

STOCKTON CITY COUNCIL

WHEREAS, on March 23, and 24, 1993, appropriate committees of the Congress of the United States will conduct hearings to consider federal appropriations for water, flood control, and fishery projects for Fiscal Year 1994; and

WHEREAS, several projects to be considered at said Congressional hearings will directly impact the City of Stockton and its environs; and

WHEREAS, expeditious construction of said projects is required to protect the health, welfare and safety of the residents of this area; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF STOCKTON AS FOLLOWS:

That the City Council hereby authorizes Councilmember Nick Rust to attend the Congressional hearings and make a personal presentation of the Council's recommendations as set out in the STATEMENT by the City of Stockton, California, before the Committee on Appropriations, Subcommittee on Energy and Water Development of the Senate and House of Representatives.

PASSED, APPROVED and ADOPTED MAR 8 1993.

/s/ JOAN DARRAH

JOAN DARRAH, Mayor
of the City of Stockton

ATTEST:

/s/ FRANCES HONG

FRANCES HONG, City Clerk
of the City of Stockton

CITY ATTY
REVIEW BOA
DATE MAR 0 3 1993

I, FRANCES HONG, do hereby certify as follows:

I am the duly appointed, acting and qualified City Clerk of the City of Stockton, a California municipal corporation; as such City Clerk, I am the custodian of the official records of the City Council of said City; the attached Resolution is a full, true and correct copy of Resolution No. 93-0098 *of said City Council, which was adopted by the City Council, on* March 8, 1993.

IN WITNESS WHEREOF, I have hereto affixed my hand and the seal of the City of Stockton this 9th *day of* March, 1993.

FRANCES HONG
City Clerk of the City of Stockton

By Shirley Ortega *Deputy*

Resolution No. 93-0098

STOCKTON CITY COUNCIL

WHEREAS, on March 23, and 24, 1993, appropriate committees of the Congress of the United States will conduct hearings to consider federal appropriations for water, flood control, and fishery projects for Fiscal Year 1994; and

WHEREAS, several projects to be considered at said Congressional hearings will directly impact the City of Stockton and its environs; and

WHEREAS, the expeditious construction of said projects is required to protect the health, welfare and safety of the residents of this area; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF STOCKTON AS FOLLOWS:

1. That the City of Stockton does hereby support the appropriation by the Congress of the United States of funds for Fiscal Year 1994 for the planning, continuation and completion of flood control and reclamation projects, namely:

a. SACRAMENTO-SAN JOAQUIN DELTA INVESTIGATION
b. SAN JOAQUIN RIVER MAINSTREAM
c. AMERICAN-SACRAMENTO RIVERS
d. AUBURN-FOLSOM SOUTH UNIT
e. AMERICAN RIVER FOLSOM SOUTH OPTIMIZATION STUDY
f. SAN JOAQUIN RIVER RESOURCE MANAGEMENT INITIATIVE

2. That the STATEMENT by the City of Stockton, California, before the Committee on Appropriations, Subcommittee on Energy and Water Development of the Senate and House of Representatives, is hereby approved as the official STATEMENT of the City Council. A copy of said document is attached as Exhibit "A" and incorporated by this reference.

3. That the Mayor is hereby directed to forward a copy of said STATEMENT to the appropriate Congressional Committees and to the City of Stockton's representatives in the Senate and House of Representatives, and the City Manager will monitor and initiate proper follow-up communication and correspondence to reflect the City Council's position.

PASSED, APPROVED and ADOPTED this 8th day of MARCH, 1993.

JOAN DARRAH, Mayor
of the City of Stockton

ATTEST:

FRANCES HONG, City Clerk
of the City of Stockton

AMERICAN AND SACRAMENTO RIVERS PROJECTS

STATEMENT OF GEORGE BARBER, CHAIRMAN, SAN JOAQUIN COUNTY BOARD OF SUPERVISORS

Mr. HILL. George Barber.

Mr. BARBER. Mr. Chairman, Senator Feinstein, I am George Barber, chairman pro tempore of the San Joaquin County Board of Supervisors, member of the Flood Control and Water Conservation District.

We are here today to present a list of projects that we are in support of: Basically, the Corps of Engineers' investigations for Sacramento-San Joaquin delta, $900,000; San Joaquin River mainstem and tributaries, $600,000; the Bureau of Reclamations project facilities, the Auburn-Folsom South Unit, $1,850,000; Bureau of Reclamations, special investigations, the American River/Folsom South optimization study, $75,000; and San Joaquin River resources management initiatives, $600,000.

With regards too the American River watershed investigations, we oppose certain features of the project. There is a more detailed analysis in our statement as to why we are in opposition to it.

Basically, you also offer an alternative at the end of the statement in that particular paragraph as to things that we have done—actually, done a reconnaissance investigation, which we feel would merit some further consideration.

Detailed comments have been submitted for the record. And I appreciate the opportunity to join with you today. And thank you very much.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF GEORGE BARBER

Mr. Chairman and members of the committee, my name is George Barber. I am a member of the Board of Supervisors of the County of San Joaquin, California.

San Joaquin County is both a County with highly productive soils devoted to a wide spectrum of agricultural crops and a rapidly growing metropolitan area. The eastern portion of our County has a seriously overdrafted groundwater basin and is in need of additional supplies of surface water. In the eastern portion of our County, which includes the rapidly growing Stockton Metropolitan area, we are subject to salt water intrusion and are now losing a portion of our very valuable groundwater basin each year. This salt water intrusion can only be stopped by partial meeting our water needs through additional supplies of surface water. San Joaquin County has long been directed by the State and Federal planning authorities to look to the American River for supplemental surface water. Other alternative water supply sources are now foreclosed to us because of the belief by State and Federal authorities that the Countys surface water supply would be available from the American River. Accordingly, we do look to the American River as our primary source of additional water.

The southwestern portion of our County, which contains the rapidly growing City of Tracy, also requires additional surface water.

By Federal and other action, the quantity of water in the San Joaquin River, which flows through the County, has been diminished and return flows from primarily Federal irrigation activities have seriously decreased the quality of water which reaches our County in the San Joaquin River. This decrease in water quality must be corrected.

With development and water demands increasing everywhere in our State, we must also be vigilant that the quantity and quality of water that is now available to us in the Sacramento-San Joaquin Delta and elsewhere in the County is not diminished.

The County of San Joaquin requests the following appropriations to be made to the Corps of Engineers and the Bureau of Reclamation for the fiscal year between October 1, 1993, and September 30, 1994, for the projects of concern to the County:

Corps of Engineers—Investigations (survey) (estimated):	
Sacramento-San Joaquin delta	$900,000
San Joaquin River mainstem and tributaries	600,000
Corps of Engineers—Investigations (preconstruction engineering and design): American River watershed, oppose features of project.	
Bureau of Reclamation:	
Project facilities: Auburn-Folsom South Unit	[1] 1,850,000
Special investigations:	
American River Folsom South optimization study	75,000
San Joaquin River resources management initiative	600,000

[1] Estimate is based on best available information and subject to change upon receipt of the President's Budget.

DETAILED COMMENTS

Corps of Engineers—Investigations (survey): Sacramento-San Joaquin delta $900,000

This important investigation is being conducted jointly with the California Department of Water Resources. This ongoing study is examining alternatives to improve flood control and water supply in the Delta. At the same time the study is looking at methods of environmental restoration such as riparian vegetation and water quality in the Delta. This study is of paramount importance in regard to current and future California water needs. San Joaquin County fully supports continued funding for this project. The County also believes that the Delta area is unique and functions in a flood control and water supply capacity as a single unit and not as a series of separate Islands. Therefore, it is important that the Corps be directed to consider the economic costs and benefits of any Delta project as a single unit, and not develop separable element Benefit/Cost ratios for each island.

San Joaquin River mainstem and tributaries $600,000

This important study is addressing many issues of significance to San Joaquin County. In particular, this study is examining the difficult sedimentation problems experienced along the San Joaquin River flood system, which contribute significantly to flooding and other problems. San Joaquin County strongly urges that the $600,000 recommended by the California Water Commission be included in the Federal budget in order that this serious problem can continue to be evaluated. This funding allows an important demonstration project to be continued. In addition, this funding allows the Corps to participate in the San Joaquin River Management Advisory Council, which was organized to deal with the rivers complex issues.

Corps of Engineers—Investigations (preconstruction engineering and design), American River watershed investigation: Oppose features of project.

While San Joaquin County supports the efforts of the Corps of Engineers and cooperating local agencies in their combined efforts to eliminate the serious flood threat to our neighbors in the metropolitan Sacramento area, we cannot support all features of this project. The County is concerned that in the Corps study, the Corps emphasizes flood control and does not adequately provide for development of a much needed water supply from the American River.

The County believes that any dam being considered for the American River should be multipurpose, and, in addition to flood control, have water supply as a primary purpose. Therefore, the County believes that the Corps should be directed to study a dam at Auburn that is multipurpose, or at the least, a truly expandable flood control dam, and be precluded from further studies of a flood control only dam. A flood control only dam is clearly shortsighted and not meeting the needs of the people of California. The County believes construction of a flood control only structure would foreclose on the States best remaining dam site for a multipurpose reservoir.

In addition, San Joaquin County believes that the Corps should be specifically directed to study the Deer Creek Reservoir project as a part of the American River Investigations. The Deer Creek project could provide additional flood control benefits to Sacramento while providing an all important water supply to the County. San Joaquin County is in dire need for any new water developed from either the Deer Creek Reservoir, or a multipurpose reservoir at Auburn, as is much of California.

Bureau of Reclamation—Project facilities: Auburn-Folsom South Unit	[1]$1,850,000

[1] Estimate is based on best available information and subject to change upon receipt of the President's Budget.

San Joaquin County strongly supports this important project which will allow the Bureau to continue study of a multipurpose dam at Auburn. This study is well underway and the people deserve to have the Bureau study a multipurpose dam at Auburn up to the Principles and Guidelines standards, and to produce a new National Environmental Policy Act document, before this option may be foreclosed upon them by the Corps flood control only dam. Non-Federal cost sharing partners, including San Joaquin County, are ready, willing and able to fund their share of the study, as has been provided over the last several years. San Joaquin County is concerned that the Corps' Auburn area project is not addressing the water needs of the County or other parts of the State as was intended by the original project. There is no question that a multipurpose dam at Auburn would have greatly lessened the effects of the recent drought on fish and wildlife resources and the people of California, as well as' provided much needed flood protection to the Sacramento area.

In addition, we strongly urge that the Bureau be directed to consider the extension of the Folsom South Canal and the provision for water supply for San Joaquin County as a part of its studies. We also urge that the Bureau be directed to consider a multipurpose project at Deer Creek, south of Sacramento, in its study. In addition to water supply, this project would provide Sacramento with flood control in the event a multipurpose project at Auburn could not be built. To this end, the County requests that $1,850,000 be included in the Federal budget for this all-important project.

Bureau of Reclamation—Special investigations: American River/Folsom South optimization study	$75,000

This study is also very important to San Joaquin County. It may provide an opportunity to gain additional urgently needed water for the County. The study is evaluating plans for concurrent surface and groundwater use from existing storage developments and tributary streams to meet the areas water needs and provide suitable in-stream flows for fishery and recreation purposes. San Joaquin County requests that $75,000 be included in the Federal budget for continuation of this study.

San Joaquin River resources management initiative	$600,000

The primary purpose of this study is to find environmental projects that will improve the fisheries and provide for more efficient use of water within the existing San Joaquin River Basin System. This study is looking at the potential for integrated operation of the basin reservoirs, conjunctive use of surface and ground water, and the rehabilitation of existing conveyance facilities as a means of providing water for fishery restoration and other environmental improvements. In addition, funding for this project allows the Bureau to participate in coordination meetings with Federal and State agencies, as well as other interested stakeholders, resulting in a coordinated effort to manage this complex river system. The County requests that the Federal budget include $600,000 for this project.

YUBA RIVER FLOOD CONTROL PROJECTS

STATEMENT OF MIMI MATHEWS, CHAIRMAN, YUBA COUNTY WATER AGENCY

Mr. HILL. Mimi Mathews.

Ms. MATHEWS. Good afternoon, Mr. Chairman and Senator Feinstein.

I am Mimi Mathews and I am a member of the county board of supervisors and chairman of the Yuba County Water Agency. We have filed a written statement. So, I will be brief.

We are urging your support for two Yuba River flood control items that are recommended by the California Water Commission. First, is $800,000 for levee restoration and construction, and $300,000 for continuation of a feasibility study that is underway to determine the most economical method to provide badly needed increased levels of flood protection for the Yuba and center counties of California.

From funds available, Yuba County Water Agency has committed to underwrite the local share of these projects and is currently acquiring right of way for levee restoration week.

Through our history, the Yuba City area has experienced devastating floods, especially after hydraulic mining debris substantially raises the riverbeds.

In recent times, major floods have occurred in 1950, 1955, 1963, 1964, 1970, and 1986. The disastrous 1955 flood cost 40 lives and displaced 30,000 people in the area.

The most recent 1986 flood displaced 25,000 people and resulted in losses in excess of $1 billion that were recently ruled in favor of the plaintiffs.

Yuba County has the highest welfare rate and the second lowest per capita income and one of the highest unemployment and crime rates of any county in California. The lack of adequate flood control is deterring industrial and commercial development that would otherwise occur and thereby create additional jobs for the area.

Thank you for the opportunity to convey our needs to you. And we hope the committee will support our request so we can continue to help ourselves. Thank you very much.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF MIMI MATHEWS

The Yuba River is the third largest tributary of the Sacramento River, exceeded in drainage area only by the Feather and American Rivers. The Yuba River Basin, which lines between the Feather and American Rivers, drains about 1,200 square miles of the Sierra Nevada Mountains. Runoff enters the Feather River at the cities of Marysville and Yuba City, which, with adjacent communities, are in flood plains protected by levees.

SUMMARY OF REQUEST

Yuba County Water Agency requests approval of appropriations of $300,000 for continuing the feasibility study that is in progress by the US Corps of Engineers and $800,000 for USCE levee restoration work. Yuba County Water Agency has entered into contract to provide the 50 percent ($1,100,000) non-federal share of the total feasibility study cost. The $800,000 is for levee restoration work in the Marysville-Yuba City Area. Yuba County Water Agency has committed to underwrite the local non-federal share of the levee restoration work in Yuba County and has started acquiring right of way for the Project. The California Reclamation Board is acting as local sponsor for both of these activities.

NEED FOR INCREASED FLOOD PROTECTION

The Marysville-Yuba City Area has grown to a population of 122,000 and is continuing to grow at a rate of about 2½% per year.

Since 1950 the Area has experienced six major floods, the latest in 1986, which displaced 25,000 people. These floods affected large areas of residential, commercial and industrial development as well as agricultural lands. The 1955 flood displaced 40,000 people and resulted in 40 deaths. The 1950 flood inundated 43,000 acres, the 1955, 63,000 acres; and the 1986, 10,700 acres.

U.S. Corps of Engineers' studies show the existing levees are only providing about a 30 year level of protection and if restored to project standards will provide in the range of 60 year level of protection.

The Yuba is one of California's major rivers with an annual average unimpaired runoff of 2.4 million acre feet. The River is comprised of three principal forks and a number of lesser tributaries. The only flood control storage on the Yuba is New Bullards Bar Reservoir on the North Fork which provides 170,000 acre feet of flood space. The Middle and South Forks of the Yuba are virtually uncontrolled with regard to flood protection. The flood space provided was intended to protect the Marysville-Yuba City Area for up to a 60 year flood event. However, reassessment of the hydrology shows the protection lower than thought.

The Yuba River watershed is steep and reacts quite rapidly to storms. The following tabulation comparing levels of flood protection for the American, Feather and Yuba Rivers reflects this in the peak one day flow figures.

River basin	Area (sq. mi.)	Peak 1-day flow[1] (cfs/sq. mi.)	Flood control storage (acre-feet)	Flood control storage (AF/sq. mi.)
Feather	2,900	[2] 74	750,000	257
Yuba	1,200	150	170,000	142
American	1,900	110	400,000	[3] 210

[1] DWR Bulletin No. 1, "Water Resources of California," 1951. Higher peaks on all basins with recent hydrology.

[2] Influenced by Lake Almanor.

[3] Would be 474 acre-feet per square mile with 500,000 acre-feet of additional storage in Auburn Reservoir found needed by Corps of Engineers.

Congress in 1966 authorized the Marysville Dam and Reservoir to provide flood protection for the Area as well as water conservation. The original site proved to be economically infeasible. The Project was reconsidered in 1976 for a different site upstream at Parks Bar, but was not able to show sufficient economic benefit at that time.

Though the Marysville-Yuba City Area is increasing in commercial and industrial development and is experiencing an increase in new housing starts, the low level of flood protection is deterring additional economic growth that would otherwise occur. Yuba County has the highest welfare rate and the second lowest per capita income of any county in California. In addition to providing higher levels of protection to existing property, increased flood protection will provide economic stimulation to the Area. The levee restoration work in itself will create additional jobs and the Yuba County area protected by the levees contains 24,395 job creating planned new residences and an enterprise zone. Without increased levels of flood protection these job creating developments are in jeopardy.

The levee restoration work and feasibility study to support higher levels of flood protection need to proceed as rapidly as possible.

—Devastating floods can occur in any year. The longer the delay in constructing needed flood facilities, the greater the risk of loss of life and property.

—Construction and property costs continue to escalate.

—Improved levels of flood protection will help stimulate the depressed economy of the Area.

LOCAL PARTICIPATION

The Yuba County Water Agency has contracted to pay the 50% non-federal share of the feasibility study and has committed to underwrite the local non-federal share of the levee restoration work in Yuba County. Yuba County Water Agency has the funds in a restricted reserve account to fully cover the committed costs.

USE OF REQUESTED FUNDING

—The $800,000 is for the U.S. Corps of Engineers to start restoring approximately 30 miles of levees in the Marysville-Yuba City Area, with construction scheduled to commence in the Fall of 1993. The work will bring the levees back to original design levels of flood protection.

—The $300,000 is for continuation of a U.S. Corps of Engineers $2,100,000 feasibility study to determine the most economic method of providing increased levels of flood protection for the Marysville-Yuba City Area.

CONCLUSION

The Marysville-Yuba City Area of California has, since the days of the Gold Rush, been the commercial hub of the region. The Area has on numerous occasions been ravaged by floods, resulting in substantial loss of life and property. Though some flood protection has been achieved through the construction of extensive levee systems and the Oroville Dam on the Feather and New Bullards Bar Dam on the North Yuba, the current facilities are not adequate to provide a reasonable level of protection to the Area. The levee restoration project and the feasibility study will contribute to improved levels of flood protection to around 100,000 people and property valued at $2 billion within the 100 year flood plan. The Area is one of high unemployment, 19 percent +. The lack of adequate flood protection, in addition to placing existing developments at risk, is restricting the development of potential additional job creating industrial and commercial enterprises.

STATEMENT OF RICHARD W. ATWATER, GENERAL MANAGER, WEST BASIN MUNICIPAL WATER DISTRICT AND CENTRAL BASIN MUNICIPAL WATER DISTRICT

WATER RECYCLING PROJECTS

Mr. Chairman and members of the Subcommittee, thank you for providing me an opportunity to testify today on the U.S. Bureau of Reclamation appropriations for fiscal year 1994. The West Basin Municipal Water District and the Central Basin Municipal Water District are requesting $12.5 million in the Bureau's appropriation under the authorization of Title XVI of Public Law 102–575. Section 1613 of Title XVI, Los Angeles Area Water Reclamation and Reuse Project, provides that the Secretary is authorized to participate with the West Basin Municipal Water District in the design and construction of water recycling facilities to produce 120,000 acre-feet annually. The federal share shall not exceed 25 percent of the total construction costs (and no federal funds are to be provided for operation and maintenance).

The West Basin Municipal Water District and Central Basin Municipal Water District today have under construction the largest water recycling and wastewater reuse program in the United States. Total design and construction expenditures to date have exceeded $50 million (1991–93). During the next three years, the districts expect construction expenditures to be an additional $200 million and will create approximately 2,500 construction jobs and over 5,000 indirect jobs.

WEST BASIN MUNICIPAL WATER DISTRICT AND CENTRAL BASIN MUNICIPAL WATER DISTRICT

The West Basin Municipal Water District and the Central Basin Municipal Water District are located in the coastal plain of Los Angeles County. Both Districts are member agencies of the Metropolitan Water District of Southern California and receive two-thirds of their annual supply from Metropolitan's import delivery system. The Districts' other sources of supply are our local groundwater and reclaimed water (recycled wastewater and reuse). Both Districts were established by popular elections under the California Special Districts Acts for Municipal Water Districts (West Basin was organized in 1947 and Central Basin in 1952). Over 40 cities are within the boundaries of the districts with an overall population of approximately 2.4 million. The districts wholesale water to approximately 50 separate water utilities.

The two districts are governed by separately elected five member Boards of Directors, but share the same administrative and engineering staff. Most of the districts water management programs and water recycling projects are jointly administered to save costs.

LOS ANGELOS AREA WATER RECLAMATION AND REUSE PROJECT

The West Basin Municipal Water District and the Central Basin Municipal Water District currently have under design and construction the largest water recycling program in the United States. These water recycling projects, in combination with the districts' water conservation, groundwater management and desalination projects will reduce their need for imported water from Northern California by over 100,000 acre-feet annually. These projects will have multiple benefits to Southern California:

- —Provide a more dependable water supply and reduce the likelihood of water rationing;
- —Lower the cost of water to industry (e.g., refineries, aerospace firms, textile manufacturing) and thereby provide incentives to not relocate;
- —Environmental protection—reduce by 25 percent the wastewater discharged into Santa Monica Bay (an EPA designated National Estuary);
- —Provide new jobs and needed infrastructure improvements to the aging water utility systems (south-central Los Angeles communities have some of the highest unemployment rates in the U.S.); and
- —By reducing the use of imported water from Northern California (including the Mono Basin and the Sacramento Delta watersheds) the districts will assist in the "statewide water solution" and significantly help in protecting the fish and wildlife resources in northern California.

The districts' water recycling projects have received widespread public support from environmental, community, and business groups. The water recycling projects are also an excellent example of local governmental cooperation. The City of Los Angeles, which owns and operates the Hyperion wastewater treatment plant (the largest plant on the West Coast) has contracted with West Basin for the supply of the wastewater in return for 25,000 acre-feet of the treated recycled water for use within the city boundaries. In addition, the Central Basin MWD has contracts with the Los Angeles County Sanitation Districts for treated recycled water from two of its water reclamation plants to distribute over 15,000 acre-feet annually through 70 miles of pipeline distribution systems. The Metropolitan Water District of Southern California has agreed to be a financial partner in these projects by contributing $154/acre-foot for each acre-foot of recycled water produced and reused (a financial commitment of over $200 million). The districts to ensure the financial feasibility of these recycling projects, have imposed annual property owner water standby charges, that raise approximately $13 million each year for the payment of the water revenue bond debt service until the recycling water sales are sufficient to pay for annual operation and maintenance and bond debt service.

CONSTRUCTION SCHEDULE

The districts have expended over $50 million of district funds to date on the construction of the water recycling projects. Since 1991 over 30 miles of distribution pipelines has been completed. Currently the West Basin Water Recycling Treatment Plant (construction bid of $44 million was awarded on February 11, 1993) work is underway and is expected to be completed in the spring of 1995; total construction costs of the West Basin Phase I construction program is approximately $150 million. In January of 1993, the Rio Hondo recycled distribution system construction was started. Total construction costs are about $30 million and include one pump station, storage tanks, and over 40 miles of distribution pipeline. Construction is scheduled to be complete in April 1993. Overall approximately $200 million in construction projects related to the recycling program are planned to be expended during the next 36 months.

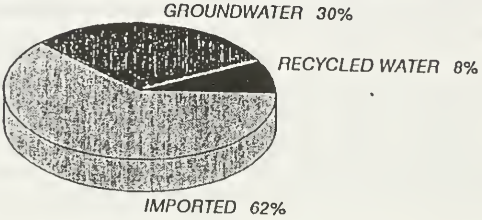
SUMMARY/CLOSING REMARKS

The West Basin Municipal Water District and the Central Basin Municipal Water District have initiated construction of the largest water recycling projects in the United States. These "state-of-the-art" recycling projects will ultimately recycle over 100,000 acre-feet annually, enough drinking water for 400,000 people. These water projects, more than any other in California will provide more benefits to more people and the environment: Conserve precious imported water from Northern California, reduce wastewater pollution to Santa Monica Bay, and create jobs in south-central Los Angeles. In California, it is unique that a water project has received such a broad array of public support, including the Los Angeles County Taxpayers Association, Congress of Senior Citizens, Mono Lake Committee, Sierra, Club, Heal the Bay, and many other environmental interest groups, business and chamber groups, and elected officials from throughout the service area. But the most important factor is the creation of local jobs in south-central Los Angeles communities and providing industry with a new, dependable and economical water supply. Mr Chairman, thank you again for the opportunity to testify today.

WEST AND CENTRAL BASIN WATER RECYCLING PROJECTS

—Integral part and link of a regional system costing over $200 million and serving approximately 100,000 AFY.
—Allows interconnection of three (to five) water recycling plants.
—Inner-cities in South Central Los Angeles benefit by the interconnection as recycled water becomes available locally.
—Reliability of supply reduces millions of dollars in back up facilities.
—Overall program costs minimized by ability to make water transfers on a regional basis.
—Economic stimulus due to additional water sources, new construction contracts, incentives to water users and businesses.

CENTRAL & WEST BASIN AREA WATER SUPPLIES



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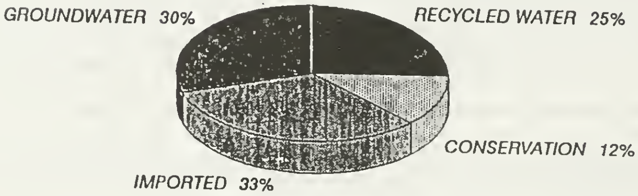

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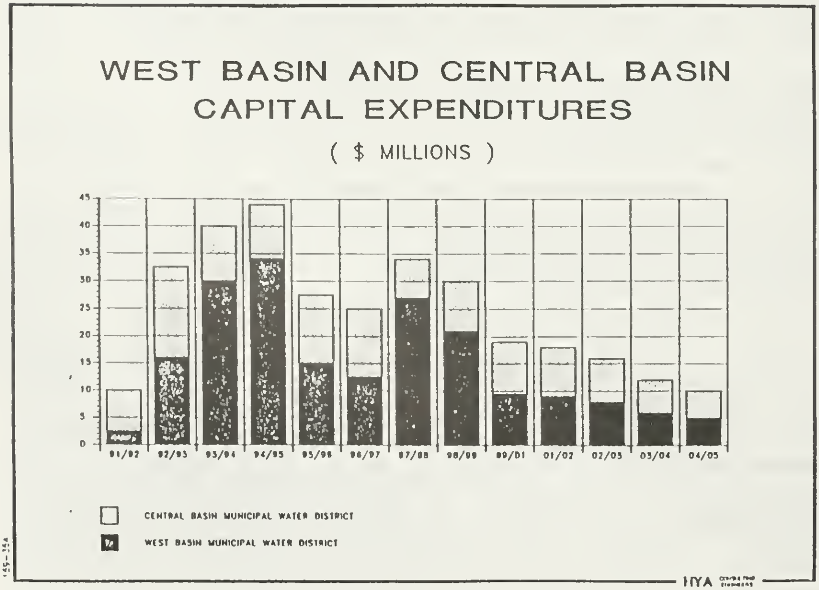

WEST BASIN AND CENTRAL BASIN CAPITAL EXPENDITURES

($ MILLIONS)

SACRAMENTO RIVER LEVEE RECONSTRUCTION

STATEMENT OF PAUL DEVEREUX, DIRECTOR OF ENGINEERING, SACRAMENTO AREA FLOOD CONTROL AGENCY

Mr. HILL. Paul Devereux.

Mr. DEVEREUX. Thank you, Mr. Chairman and Senator Feinstein. I appreciate the opportunity to appear before the committee today.

First of all, I would like to thank this committee's past support of Sacramento's efforts to obtain a very high level of flood protection, which is commensurate with the risk that we face and that which is comparable to many metropolitan communities around the Nation that are similarly situated to us.

We have some 300,000 people and billions of dollars of investment sitting right now in Sacramento and American River flood plain.

In order to meet this challenge, we ask this subcommittee's support of the continued preconstruction engineering and design studies under the Corps of Engineers to try to resolve, once and for all, a long-term flood control project for Sacramento.

In addition, we are requesting some additional funds under the Sacramento River urban levee reconstruction project to repair the Sacramento River wall, which protects downtown, the portions of old town Sacramento, and $350,000 to complete the reconnaissance level study for the Morrison Creek in the south Sacramento area.

Once again, I thank you for the time today to appear and urge your support for these projects.

Senator JOHNSTON. Thank you.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF PAUL DEVEREUX

My name is Paul Devereux, Director of Engineering of the Sacramento Area Flood Control Agency (SAFCA). I am here today on behalf of our Board of Directors, the City of Sacramento, Sacramento County Sutter County, Reclamation District 1000, and the American River Flood Control District to solicit your Subcommittees continued support in resolving our regions most critical infrastructure problem—flood protection. The following projects represent those which have been considered and endorsed by the California Water Commission.

First of all, I would like to thank this Subcommittee for their support in our efforts to achieve the high level of flood protection commensurate with the risk and comparable with similarly situated metropolitan areas around the nation. This support was particularly critical during our 1992 efforts towards Congressional authorization for the American River Project supported by the Corps of Engineers, State of California, SAFCA, and a consensus of community and business leaders.

The fact that the American River Project was not included in the 1992 Water Resources Development Act does not make the problem go away and has not diminished the need nor our desire for an appropriate level of flood protection. Although we intend to move forward in a responsible manner to increase our flood protection; local efforts can only modestly reduce the risk for the 300,000 people and $25 billion in property located within the floodplain. Our need for a long term solution to provide a high level of flood protection along the American River remains critical. The Sacramento community strongly supports $2 million to continue funding preconstruction, engineering and design of the American River Project to provide the supplemental environmental and engineering data needed to fairly evaluate all the alternatives and lead to authorization for a long term solution on the American River.

In addition, the Corps of Engineers is in the process of completing construction on the Sacramento Urban Area Levee Reconstruction Project to stabilize the existing Sacramento River levee system through our community. However, a vital reach within the system, the Sacramento Riverwall protecting Downtown and historic Old Sacramento, was not included during the initial system evaluation. The riverwall has been found to be structurally unstable with serious erosion along the slope below the footing. Sacramento supports including $6 million in funding under the SUALRP with direction to the Corps to expeditiously proceed with stabilization of the riverwall.

Finally, Sacramento supports continued funding in the amount of $350,000 to complete the reconnaissance level study for the South Sacramento County Streams investigation to evaluate flooding along Morrison Creek due to revised hydrologic information and inadequate channel capacities.

Sacramento has continued to work with the federal and state governments within the guidelines established by this Congress on all of the above projects. We have made some progress over the past six years, but the risk of catastrophic flooding is still unacceptable considering the potential for damages. Therefore, on behalf of the Sacramento community, we request your continued support in funding Sacramento's efforts to solve our flood risk now and rather than after we become another multi-billion dollar natural disaster.

BACKGROUND

The Sacramento community has consistently maintained an historic objective to maintain a high level of flood protection commensurate with not only the frequency of occurrence, but also the severity of a catastrophic flood event and its impact on life and property. Our community precariously sits at the confluence of two major rivers which collect the vast majority of Northern California's storm runoff. The last line of defense in Sacramento between flood flows and urban development are miles of earthen levees constructed over the years which have the potential for sudden and catastrophic failure from a number of causes which cannot always be predicted or prevented. Such a catastrophic failure leaves little time for evacuation or emergency operations to prevent property damage and loss of life. Behind these levees resides a population of over 300,000 people and $25 billion in property. For more than 60 years, local community officials have been working with the federal and state governments to provide a level of protection consistent with the risk and consequences of a catastrophic flood.

Construction of Folsom Dam along the American River together with the Sacramento River Flood Control System was to provide Sacramento with a very high (in excess of 250 year) level of flood protection. Before the reservoir was fully functional, a series of storms swept through the region filling the nearly empty reservoir in 1955. Based on this single event, the hydrologic frequency analysis was significantly changed and the level of protection afforded Sacramento was downgraded by a half to 120 year protection. However, a multi-purpose Auburn Dam proposed for construction in the American River above Folsom was to include flood control storage sufficient to bring Sacramento back to within range of its flood control objective.

The Auburn project, authorized in 1965, proceeded through several years of construction until an earthquake suspended construction in order to address the seismicity of the region and design parameters of the dam. These problems were finally resolved, but a change in the cost sharing formula for water development projects in 1980 thwarted any efforts to reactivate construction.

In 1986, Sacramento was again reminded of its precarious situation when a series of storms in Northern California produced record runoff volumes in the American River along with record stages in the Sacramento River. These flows severely tested the existing system to the brink of failure. Fortunately; the rains and runoff subsided avoiding a catastrophic flood event literally by hours. However the storm did serve to notify the community of the deficiencies in the system and give warning that storms capable of producing runoff in excess of the systems capacity could occur more frequently than anticipated. The level of protection afforded by the existing system has been again downgraded by the Corps to a 63-year level—far short of what is enjoyed by any other similarly situated metropolitan area around the nation and certainly inappropriate for a highly urbanized population center like Sacramento.

The community quickly moved together forming SAFCA to work with the Corps and State to address the serious public safety threat. Since 1986, the Corps has completed work under the Sacramento Urban Area Levee Reconstruction Project to stabilize deficient levees along the Sacramento River identified during a comprehensive evaluation following the flood event.

In order to address the potential for runoff from the American River watershed in excess of existing system capacity, the American River Watershed Investigation was initiated. After over two years of feasibility level evaluation for a variety of flood control alternatives, the Corps of Engineers with the support of the State and SAFCA recommended a 200-year flood control project which included a peak flow detention dam near Auburn and levee modifications in the Sacramento area. The project was intended to remain neutral on the chronic Auburn Dam debate which has continued for over three decades from Sacramento back to Washington. However, the controversies surrounding the dry dam overshadowed the public safety aspect of the project and Congress did not include the American River Project in the 1992 Water Resources Development Act. However, in subsequent Defense Appropriations Act legislation, Congress did authorize the Sacramento area portion of the project. The legislation further directed the Corps to continue preconstruction, engineering, and design studies to resolve some of the technical issues raised about the proposed detention dam and to evaluate in more detail other alternatives previously rejected in the planning process.

It is critical that efforts continue at the federal level to eventually identify an acceptable long term project which can be authorized by Congress. The problem has not been diminished by the setback of 1992, nor is our resolve to responsibly meet the public safety needs of the community. Sacramento is here today to tell Congress of our significant public safety risk and request their continued assistance to solve the problem. SAFCA strongly supports the recommended $2 million in preconstruction, engineering and design funds for the American River Project so the merits and impacts of all the alternatives can continue to be fairly evaluated. We need to get on with the process. It has been seven years since the flood event; Sacramento does not have the luxury of waiting much longer.

With some uncertainty over long term prospects for flood control on the American River, Sacramento has been forced to move forward with local efforts to raise the level of flood protection. However, these efforts will not provide the desired level of protection commensurate with the risk, and are considered interim in anticipation of a long term solution. Our efforts, when implemented, will bring increased flood protection to some 40,000 residents subject to the worst flood depths in Sacramento. SAFCA is exploring all options at the present time to expedite implementation of this project and may be back to this Subcommittee in the near future soliciting your support.

As previously indicated, the Corps is completing stabilization of the Sacramento River levees under the Sacramento Urban Area Levee Reconstruction Project (SUALRP). Thanks to the past support from this Subcommittee, the project will be completed this fiscal year providing significant relief from flood risks along the Sacramento River. However, the Sacramento Riverwall adjacent to the Downtown area providing flood protection to many historic structures as well as portions of Downtown and Interstate 5, the major north-south transportation route in the west was not evaluated under the SUALRP. The riverwall has subsequently been evaluated by a consultant for the City of Sacramento and found to be unstable with severe erosion of the bank extending from the toe of the wall. The wall was constructed in the early part of this century and does not meet todays minimum design standards. The City has estimated that collapse of the wall during flood stage would produce flood depths in excess of five feet over portions of Downtown within hours leaving minimal time for evacuation or damage prevention.

SAFCA along with the City of Sacramento supports $6 million be included under the existing SUALRP to allow the Corps to stabilize the riverwall. Engineering documentation developed by the City and its consultant has already been reviewed by the Corps who concur with the report and its recommendations. This information has been made available to the Corps to facilitate implementation of the project.

Finally, SAFCA supports continued funding in the amount of $350,000 to complete the reconnaissance study for the South Sacramento County Stream group. Similar to the American River, new hydrologic analysis have suggested the existing channel capacities in the lower Morrison Creek stream groups are inadequate and adjacent low-lying properties are subject to frequent inundation. Completion of the reconnaissance level study will likely identify a cost effective project and lead to a feasibility study for eventual project implementation.

The Sacramento community has pulled together in a responsible manner to address our number one public infrastructure problem—flood protection. We have, and will continue to spend local funds to identify and implement responsible flood control projects. However, we need the support of the federal government to achieve the long term high-level of flood protection appropriate for the frequency and severity of a catastrophic flood event in Sacramento. We request the Subcommittees continued support in recognition of our communities efforts to resolve the public safety risk. With your Subcommittees help we can move one step closer to eventually meeting Sacramento's needs for a high level of flood protection.

Once again, thank you for your consideration and support.

SUCCESS RESERVOIR ENLARGEMENT PROJECT

STATEMENT OF RICHARD L. SCHAFER, SECRETARY, TULE RIVER ASSOCIATION

Mr. HILL. Richard Schafer.

Mr. SCHAFER. Chairman Johnston, Senator Feinstein, my name is Dick Schafer. I serve as watermaster and secretary of the Tule River Association.

I would also like to introduce Mr. Roger Robb, general manager of the Lower Tule River Irrigation District, a member unit of the Tule River Association.

This year, Mr. Chairman, I request your committee direct the Corps of Engineers to expedite and complete the seismic study for Success Dam, including the termination of remediation, if any, by June 30, 1994, for authorization of correction of any dam safety problems as part of the Water Resources Development Act of 1994, with local cost sharing under title 12 of Public Law 99–662.

We were told that the Corps have adequate funds scheduled under the O&M budget, but we would appreciate it if you would watch that and make sure they have sufficient funds to complete those seismic studies in this timeframe.

We further request your committee to direct the Corps to commence immediately preconstruction engineering and design of the Success Reservoir enlargement, a flood control and water conservation project, by first completing the NEPER requirements, updating the construction cost estimate and other tasks they have identified in the interim reports submitted last year, such that that report can be transferred to the Office of the Chief of the Corps of Engineers for a feasibility review conference and submittal to the Congress, such that, again, authorization of the enlargement project won't commence in fiscal year 1994.

We have been working on this project for some 7 years. We request the committee's appropriation of a modest $100,000 in the 1994 budget, such that the Corps can complete the feasibility report under PED activities.

The enlargement, again, will be cost-shared as required by Public Law 99–662. We thank you for your consideration.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF DICK SCHAFER

Mr. Chairman, and members of the committee, my name is Dick Schafer, I serve as Secretary of the Tule River Association and watermaster of the Tule River. I am appearing today in support of an appropriation in the 1994 budget of $100,000 for the continued funding of the Corps' General Investigation, Preconstruction, Engineering and Design of the Tule River Basin, Success Reservoir Enlargement Project.

PURPOSE OF PROJECT

The Purpose of the Tule River Basin Investigation, Success Reservoir Enlargement Project is to improve flood control and water conservation of Tule River flows for the urban area of the City of Porterville and the downstream agricultural lands within Tulare and Kings Counties, California.

The Success Reservoir Enlargement Project simply involves raising the Reservoir spillway 10-feet. Currently there is 39-feet of freeboard from the crest of the spillway to the top of the dam. By raising the spillway 10-feet the storage capacity of Success Reservoir is increased 28,000 acre-feet (82,000 a.f. to 110,000 a.f.) and the flood protection is nearly doubled by providing flood control of a storm event occurring once in 100-years instead of once in 60-years as presently exists.

The Tule River floods of 1966 and 1969, subsequent to completion of Success Dam and Reservoir in 1961, caused estimated damages of $5,000,000 downstream of the Dam with additional flood damages in the Tulare Lakebed in years 1978, 1980, 1982 and 1983.

STUDY AREA

The study area covers portions of Tulare and Kings Counties, California at and below Success Reservoir on Tule River containing a gross area of 324,000 acres. (see Study Area Map, Plate 1, Exhibit "A"). Of the gross area, 239,900 acres are developed for the production of numerous agricultural crops with the remaining area in urban and non-agricultural uses.

The highly diversification of crops grown in the service area create gross revenues in excess of $200-million per year.

PROJECT FEASIBILITY

The Tule River Basin Investigation California, Interim Report, prepared by the Corps under a Feasibility Cost Sharing Agreement was completed in March 1992 and submitted to Washington in June 1992.

The flood control and water conservation project costs, as estimated by the Corps, are $13.5 million including $3.9 million for mitigation of environmental impacts, however with the inclusion of an upstream toe berm for additional seismic protection, as conditioned by the Corps, project costs are increased $9.6 million (See Summary of Cost Estimates, Exhibit "B") reducing the cost to benefit ratio from 1.4:1 to 0.9:1. (see B/C Ratio tabulation, Exhibit "C"). Without inclusion of costs of the seismic correction and a Project benefit to cost ratio of 1.4:1, there is clearly satisfactory feasibility for federal participation.

After involvement of the California Congressional delegation, the Corps of Engineers agreed to conduct a technical review conference in June 1992 on the 1983 seismic study of Success Dam. It was the consensus of the Corps experts that further studies were warranted and a phased program was developed as follows:

Phase I.—October 1992–June 1993. Update the 1983 earthquake stability analysis using existing information and state-of-the-art procedures. A draft report as prepared by the Corps Water Ways Experimentation Station (WES) of Vicksburg, Mississippi is to be released in May, 1993, estimated cost—$200,000.

Phase II.—September 1993–June 1995. Upstream geophysical exploration and laboratory work, Dynamic analysis; Post earthquake stability analysis and report, estimated cost—$1,000,000.

Phase III.—July 1995–August 1996. Deformation model studies and remedial requirements, estimated cost—$500,000.

The Tule River Association has requested that the Corps expedite the updated dynamic analysis for determination of the need for, and desirability of, constructing an upstream toe berm for reservoir embankment stability by May 31, 1994 in conformance with the Congressional directive of Public Law 102–580, Section 114(c) (see below).

Thus, allowing authorization of the Success Reservoir Enlargement project as part of the WRDA of 1994.

LEGISLATION

The House Subcommittee on Water Resources conducted hearings on the Water Resources Development Act of 1992 on March 4, March 11, and March 19, 1992 with Congressman Dooley and the Tule River Association submitting testimony in support of authorization of the Success Reservoir Enlargement Project. The House Public Works Committee included in the 1992 projects bill, HR 6167, Public law 102–580, Section 114(c) the following language: "Success Reservoir, Tule River, California—Not later than May 31, 1994, the Secretary shall complete and transmit to Congress a feasibility study for enlargement of the flood control project for the Success Reservoir, on the Tule River, California, authorized by section 10 of the Act entitled "An Act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes", approved December 22, 1944 (58 Stat. 901). The study shall include a review of the need for and desirability of, construction of an upstream toe berm for reservoir embankment stability. The non-Federal share of the enlargement of the project shall be determined in accordance with section 903(c) of the Water Resources Development Act of 1986."

The Congress still needs to provide clear direction to the Secretary of the Army for separation of the seismic investigation, (a dam safety issue) from the Success Reservoir Enlargement Project (a flood control and water conservation project). Any correction of Success Dam for seismic stability should be authorized and funded under Title XII, Dam Safety, Public Law 99–662.

In addition, the Corps and the Congress need to accept the "Interim Report, Tule River Basin Investigation, California, March 1992" as prepared, and further the Congress needs to direct the Corps to proceed with preconstruction engineering and design (PED) of the Success Reservoir Enlargement Project, complete the environment assessment and mitigation, update the cost estimate (including real estate) and any other incompleted tasks of the feasibility study as identified in the "Interim Report" as part of PED. Thereby, causing the project to proceed without further costly study and assure the Corps compliance with Public Law 102–580, Section 114(c).

The Success Reservoir Enlargement Project requires only minimal engineering design for commencement of construction and would readily provide a federal public works project for employment of people, however, authorization, appropriation and clear direction to the Corps would be required of the Congress.

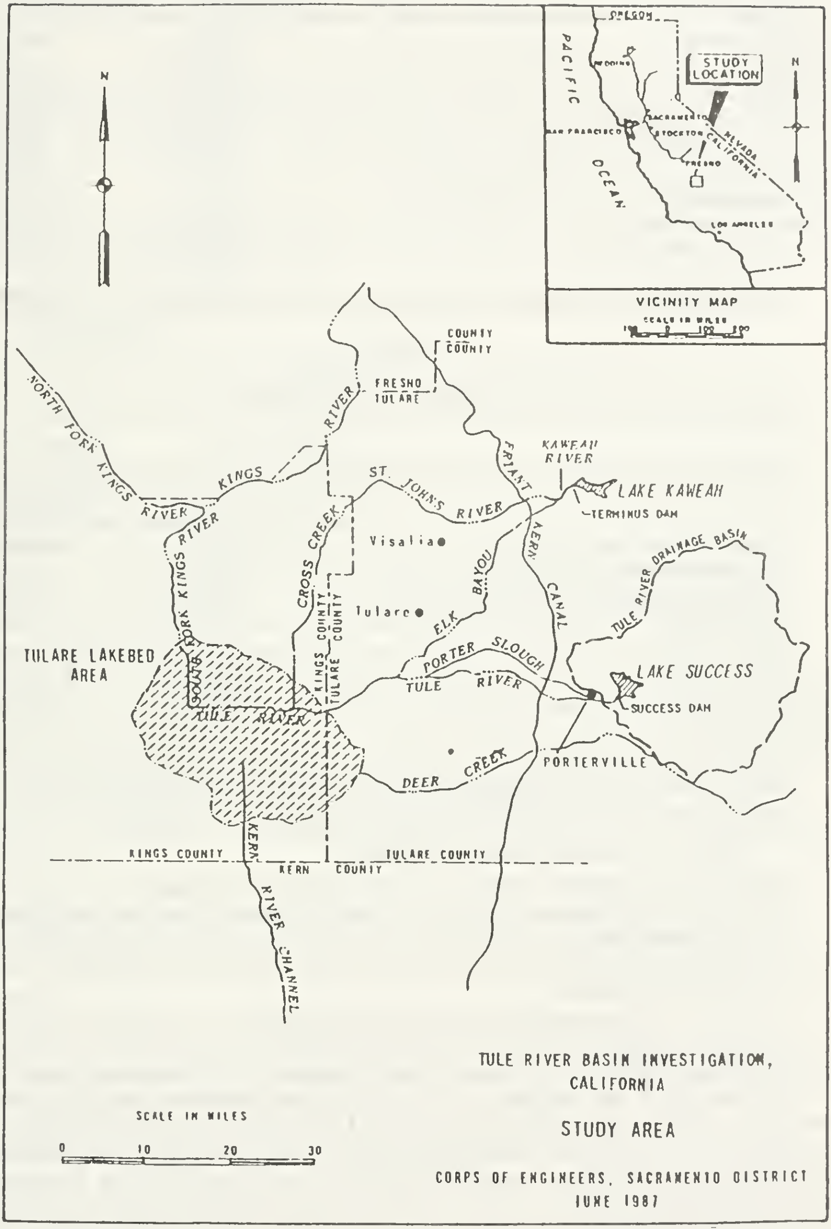
APPROPRIATIONS

General investigation funds for the U. S. Army Corps of Engineers were included in the Federal Budget for fiscal years 1987 through 1991 under the Water Resources Development Act of 1986 (WRDA of 1986) and under the Feasibility Cost Sharing Agreement (FCSA) dated May, 1988 between the United States and the Lower Tule River Irrigation District. Federal funds expended to date in the feasibility study have been $819,000. In addition, the local interests have contributed $529,000 for the Corps preparation of the Success Reservoir Enlargement Project Feasibility Study and Interim Report under the FCSA.

The 1993 President's budget included $200,000 for Preconstruction Engineering and Design (PED) in anticipation of authorization of the Success Reservoir Enlargement Project as part of the Water Resources Development Act of 1992. Such funds, although made available and directed for use by the Congress, have not to date been assigned by the Corps.

The request for and the inclusion of $100,000 in the fiscal year 1992–1993 budget would allow the continued orderly development of the Success Reservoir Enlargement Project.

EXHIBIT A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TULE RIVER DRAINAGE BASIN
KINGS COUNTY
TULARE COUNTY
PORTER SLOUGH
TULE RIVER
LAKE SUCCESS
SUCCESS DAM
TULARE LAKEBED AREA
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TULE RIVER BASIN INVESTIGATION, CALIFORNIA
STUDY AREA
CORPS OF ENGINEERS, SACRAMENTO DISTRICT
JUNE 1987

EXHIBIT B

TULE RIVER BASIN INVESTIGATION—SUMMARY OF COST ESTIMATES

	Buttress included	Buttress excluded
Lands and damages	$932,850	$932,850
Relocations	529,200	529,200
Reservoirs	706,300	706,300
Dams	11,865,910	3,505,310
Fish and wildlife (mitigation)	3,949,200	3,949,200
Roads	399,700	399,700
Recreation resiting	1,504,875	1,504,875
Cultural resources	151,200	151,200
Engineering and design	1,990,000	1,190,000
Supervision and administration	1,070,765	631,365
Total first costs	23,100,000	13,500,000

EXHIBIT C

TULE RIVER BASIN INVESTIGATION—B/C

	Buttress included	Buttress excluded
First costs	$23,100,000	$13,500,000
Flood reduction benefits	1,381,000	1,381,000
Water supply benefits	298,000	298,000
Incidential hydropower benefits	27,000	27,000
Incidential recreation	66,000	66,000
Buttress benefits	67,000	
Total annual benefits	1,839,000	1,772,000
Annual costs	2,168,000	1,312,000
Benefits/costs ratio	0.85:1	1.35:1

Los Angeles Area Water Reclamation and Reuse Project

STATEMENT OF RICHARD ATWATER, GENERAL MANAGER, WEST BASIN MUNICIPAL WATER DISTRICT

Mr. Hill. Our next speaker will be Richard Atwater.

Mr. Atwater. Thank you, Mr. Chairman and Senator Feinstein. I would first like to very much compliment the chairman for his active support and leadership last year in the passage of the Central Valley Project Act.

Included in the passage of that act was title 16, which includes the project that we would like to talk to you about today. And that is the West Basin water recycling project in Los Angeles County.

It is unusual in California, as I know the chairman and the Senator are well aware, to have a project like this project in L.A. County that has this broad, widespread support for groups like Rebuild Los Angeles, building new facilities in south-central Los Angeles, environmental interest groups, community groups, business groups, Los Angeles County Tax Affairs Association, because of the benefits of providing a new dependable water supply to the major refineries, aerospace industry in the south bay area, and also providing a new supplemental supply of city water for northern California, and reducing wastewater pollution in Santa Monica Bay, an EPA-designated national oystery.

And, of course, it has resulted in widespread support. We are currently under construction. We have expended over $50 million in the last 2 years in waiting for the passage of this CVP reform bill.

And now, we are looking forward to the U.S. Bureau of Reclamation's participation over the next 2 to 3 years in providing needed jobs in south-central Los Angeles. With the commission's support request, we respectfully ask you for $12.5 million in fiscal year 1994.

In addition, we would like to just highlight—and I would ask Martha Davis from the Mono Lake Committee to talk about some of the other statewide benefits.

STATEMENT OF MARTHA DAVIS, EXECUTIVE DIRECTOR, MONO LAKE COMMITTEE

Ms. DAVIS. Thank you very much.

I would like, first, to say thank you, Senator Feinstein, for all of the work last year in the passage of H.R. 429, as well as the chairman.

And as a member of that coalition, I strongly support your statement earlier today on the need for addressing the implementation of H.R. 429.

I sit here with Mr. Atwater in what is a unique partnership with respect to title 16 of H.R. 429. By any measure, this project, the west basin project, offers a powerful combination of environmental, economic, and social benefits to the State of California.

One of the primary beneficiaries of this project is the protection of Mono Lake. Congress declared as part of this legislation that west basin would offset water diversions from the environmentally fragile Mono Lake.

And this will ensure that the solution to Mono Lake is the development of replacement water in the south land, not in northern California. We fully support this project. We think it is very important.

Thank you.

Senator JOHNSTON. How is the water level in Mono Lake now?

Ms. DAVIS. Mr. Chairman, unfortunately, we suffered from the drought along with the rest of California. We are several feet below where we need to be in order to protect this very important ecosystem.

Senator JOHNSTON. It didn't fill up during the rains.

Ms. DAVIS. Actually, the lake is starting to rise right now. And with luck and with the project that is here on the table, we have an opportunity to solve this problem once and for all for the State of California and to do it in a way that says we can solve these problems and connect them with jobs for California and connect them with a very progressive water policy as represented in H.R. 429.

Thank you.

Mr. HILL. She did not mention the fact that we have about a 150-inch snow pack in that range. So, it will help.

[The statement follows:]

STATEMENT OF MARTHA DAVIS

Chairman Johnston and members of the committee, on behalf of the Mono Lake Committee, thank you for providing me with an opportunity to testify today to support funding for Title 16 of H.R. 429 (Public Law 102–575), enacted last year. I am pleased to appear before you with Mr. Rich Atwater, General Manager of the West Basin Municipal Water District.

Title 16 authorizes funding for the development of 120,000 acre feet of reclaimed water in the southland to replace Los Angeles Department of Water and Power (LADWP) Mono Basin diversions and protect Mono Lake through two projects: the West Basin and East Valley waste water reclamation projects.

When authorized last year, Congress declared that these projects would offset water diversions from the environmentally sensitive Mono Lake Basin.

The Mono Lake Committee supports the West Basin and East Valley waste water reclamation projects.

This unique authorization provides for the following powerful combination of benefits:

Environmental benefits.—Mono Lake protection; and Santa Monica Bay protection.

Job benefits.—Los Angeles/California jobs; Los Angeles/California economic stimulus; job training program at West Basin; and long-term operation and maintenance jobs.

Economic benefits to southern California.—Development of lower cost "in-basin" water supplies for the Southland; increased reliability of water supply; reduced dependence on water imported from northern California; and long-term financial savings.

SALINAS VALLEY RECLAMATION PROJECT

STATEMENT OF KEITH ISRAEL, GENERAL MANAGER, MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY

Mr. HILL. Next is Keith Israel.

Mr. ISRAEL. Mr. Chairman, Senator Feinstein, my name is Keith Israel. I am the general manger of the Monterey Regional Water Pollution Control Agency.

Northern Monterey County faces a critical problem with seawater intrusion. This contamination of the water supply, if not stopped, will take thousands of acres of prime Salinas Valley cropland out of production and ruin the area's drinking water supply.

My agency's projects—we use this highly treated, reclaimed wastewater and apply it to food crops and, thereby, reduce ground water pumping, slow seawater intrusion, and protect the drinking water supply.

This project will be the largest use of reclaimed wastewater for food crops and thus will serve as a full-scale demonstration that will encourage further use of reclaimed wastewater in both California and the Nation.

We request your full support for funding of this unique and critical project in fiscal year 1994 in the amount of $3.17 million to allow design and construction to start.

This project, if funded, will also have additional benefits of first reducing our wastewater discharge to the newly created and environmentally sensitive Monterey Bay Sanctuary.

Second, helping to provide jobs will buffer the accelerated closure of Fort Ord this year. Monterey County's unemployment rate is one of the highest in the country, and last month alone was reported at 18.5 percent.

And finally, I think almost everyone is aware that California has a critical need for new long-term water resources. Wastewater reclamation is a method that can supply much of this requirement and avoid the wasteful practice of discharge of a valuable resource to the Pacific Ocean.

Thank you for your consideration.

[The statement follows:]

STATEMENT OF KEITH ISRAEL

BACKGROUND

Monterey Regional Water Pollution Control Agency, a joint-powers entity formed under laws of the state of California, was created in the early 1970's to implement a plan that called for consolidation of the Monterey Peninsula and northern Salinas Valley wastewater flows through a regional treatment plant and an outfall to central Monterey Bay. The plan also required studies to determine the technical feasibility of using reclaimed water for irrigation of food crops (artichokes, celery, broccoli, lettuce, and cauliflower) in the Castroville area. These studies were initiated in 1976 and included a five year full-scale demonstration of using reclaimed wastewater for food crop irrigation. California and Monterey County health departments used study results to define the treatment process required for irrigation of food crops that may be consumed without cooking.

Following 1988 state and local health department approvals, the Salinas Valley Seawater Intrusion Committee voted to include reclaimed water in their plan to slow seawater intrusion in the Castroville area. However, financial feasibility of including a tertiary treatment plant in their plan depends on the availability of federal funds through the Small Reclamation Projects Act (Public Law 84–984, as amended).

The reclamation project will provide water to lands south and west of Castroville where abandonment of wells threatens agricultural production and the loss of a portion of rural America. It will also reduce discharge of secondary treated wastewater to the recently created Monterey Bay National Marine Sanctuary. If lands in the Castroville area go out of production up to 6,000 jobs could be lost. This would be in addition to the expected loss of 30,000 jobs when facilities at the nearby Fort Ord close. Currently unemployment in the Castroville area is more than 20 percent. Federal funding for this project will not only prevent the loss of jobs in the future but could create up to 1,400 jobs during the design, manufacturing, and construction phases of implementation.

Federal funds requested are a loan under the Public Law 984 program and will be repaid by landowners in the Salinas Valley. Assessment procedures are currently in place to collect funds required to operate the project and repay the federal loan.

Additional background information, project concepts, operational plans, and project costs are described for the Salinas Valley Reclamation Project and a companion reclaimed water distribution project (proposed by the Monterey Water Resources Agency) in the attached informational brochure. The expected source of funds required for the reclamation project are as follows:

Public Law 84–984 loan	$20,540,000
Other financial sources	6,900,000
Total	27,440,000
Fiscal year 1994 request	3,170,000

Salinas Valley Reclamation and Irrigation Projects

Seawater intrusion has accentuated the critical need for water in Northern Monterey County.

There are three separate groundwater aquifers in the northern part of the Salinas Valley (An aquifer is a water-bearing layer of rock, sand, or gravel.) One is located about 180 feet below the surface, one about 400 feet, and one about 900 feet. Seawater has moved into both of the upper aquifers near the coast (Figure 1), but not the 900-foot aquifer This intrusion has made the groundwater so salty that it is unusable for crop irrigation or municipal use.

Seawater intrusion has two causes. The primary cause is excessive groundwater pumping in the valley The second cause is the lack of replenishment of fresh groundwater from other parts of the valley

Seawater intrusion can have a number of effects, including loss of agricultural jobs, curtailment of growth, reduction in land values, and an increase in the cost of water The seriousness of these effects has generated the need for a combination of solutions, which fall into three general categories (1) reduce the amount of groundwater consumed, (2) increase the amount of water replenished into the aquifer and (3) find other

Benefits of the Projects

- Provide a new water source of up to 30,000 acre-feet per year.
- Reduce groundwater withdrawal in seawater intruded aquifers.
- Stabilize the local agricultural economy.
- Reduce wastewater discharge to Monterey Bay.
- Reduce artificial fertilizer needs

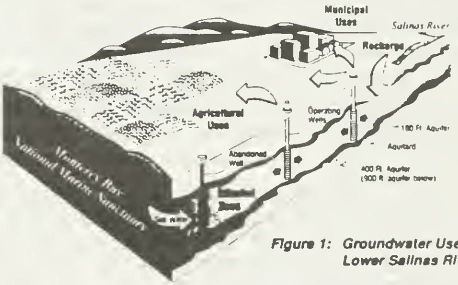


Figure 1: Groundwater Uses in the Lower Salinas River Basin

Monterey Bay National Marine Sanctuary

Maintaining and enhancing the environment is a key objective of the Reclamation and Castroville Irrigation projects. By reclaiming wastewater MRWPCA currently discharges to Monterey Bay, the quality of the Bay and the proposed Monterey Bay National Marine Sanctuary will be enhanced.

Monterey Bay and its adjoining waters provide one of the richest, most varied marine environments along the Pacific coast. Among the region's special features and resources are the Monterey Submarine canyon (the largest on the West Coast), kelp forests, invertebrates, marine mammals, sea and shore birds fisheries extensive recreation and tourism opportunities, and scientific and research facilities. To protect these resources, a National Marine Sanctuary, extending from the existing Gulf of Farallones sanctuary (near Point Reyes) south to near San Luis Obispo, has been proposed under the auspices of the National Oceanic and Atmospheric Administration. These boundaries encompass an area of approximately 4,024 square nautical miles.

sources of water besides groundwater Groundwater consumption is being reduced through efforts of the Monterey County Water Resources Agency (MCWRA), which is working with farmers to implement water conservation measures

Replenishment of the aquifer occurs primarily by percolation through the beds of the Salinas River and its tributaries One method to increase this percolation is to keep water in the river most of the year Two reservoirs were constructed to provide year-round flows—Nacimiento Dam, completed in 1957, and San Antonio Dam, completed in 1965 These reservoirs have stabilized groundwater levels in the southern part of the valley (near the reservoirs), but, because much of this groundwater is intercepted before it reaches the intruded portions of the aquifers, they have only provided a partial solution to the seawater intrusion problem

The third and most effective method of reducing the rate of seawater intrusion is to find alternative water sources In 1982 the Arroyo Seco Project, a reservoir and water distribution system, was proposed However, widespread support for this project did not develop and the project was not pursued The water source that has become the most viable is highly-treated wastewater termed "reclaimed water"

As a result of the efforts to date a proposed solution to the seawater intrusion problem—the Seawater Intrusion Program—has been developed a major component of which is a reclaimed water irrigation supply to farmers in the Castroville area Using a partnership approach the Monterey Regional Water Pollution Control Agency (MRWPCA) and MCWRA are developing this supply, which contains three components (Figure 2):

1. The Monterey County Reclamation Project (proposed by MRWPCA) which consists of a reclamation plant and transmission pipelines to the irrigation distribution system
2. The Castroville Irrigation Water Supply Project (proposed by MCWRA), which consists of an irrigation distribution system to the farms and back-up (standby) wells
3. A seasonal storage facility which may be implemented in the future to store excess wintertime reclaimed water flows for later use during peak summertime irrigation periods

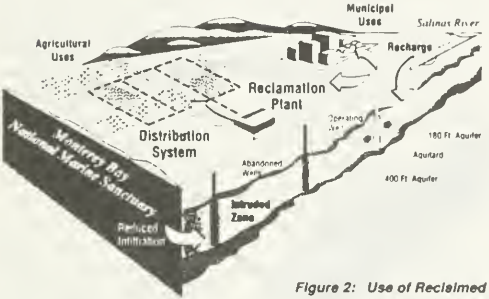


Figure 2:* *Use of Reclaimed Water in the Seawater Intrusion Program

Development of the Reclamation Concept

Important steps have already been taken to develop reclaimed water as a valuable new resource.

As part of the environmental approval process for developing reclamation, MRWPCA completed studies on the safety of using reclaimed water for irrigation of food crops The Monterey Wastewater Reclamation Study for Agriculture (MWRSA) consisted of full-scale field tests conducted between 1980 and 1985 using reclaimed wastewater on various food crops, including artichokes, celery, broccoli, lettuce, and cauliflower.

Extensive crop and effluent testing was done The conclusions were published in 1987 and confirmed that tertiary treated wastewater could be safely used for all types of irrigation of these uncooked food crops.

Based on the results of the MWRSA project, the California Department of Health Services (DOHS) issued new criteria governing reclaimed water irrigation of uncooked crops (referred to as "nonprocessed food crops"). The Monterey County Department of Health reviewed the DOHS recommendations and concurred. These new criteria will be used in the design and operation of the new reclamation system.

Balancing Reclaimed Water Availability and Demands

Storage and alternative uses must be considered to optimize use of reclaimed water.

Reclaimed water will be produced at a relatively constant rate throughout the year (Figure 3). However, agricultural irrigation demand varies significantly over the year. During the winter, there will be more reclaimed water available than can be directly used for irrigation, while in the summer, irrigation demand will exceed the available reclaimed water supply. Assuming an initial average annual wastewater flow rate of 23 mgd, 17,600 acre-ft out of a total of 25,800 acre-ft of reclaimed water will be directly available to the Castroville Project each year (Table 1). The remaining summertime irrigation demand would need to be met by the stand-by wells. The excess winter reclamation flows (8,200 acre-ft) would be available for other uses. In the future, annual available reclaimed water is expected to increase to 33,200 acre-ft with 21,300 acre-ft directly available for irrigation.

In order to make full use of all available reclaimed water, storage of the excess winter reclaimed water must be provided. This seasonal storage could be provided in an aboveground (surface) reservoir or by storage underground in an existing intruded groundwater aquifer and pumping out later. Such underground storage is termed aquifer storage and recovery, or ASR (Figure 4). Both types of seasonal storage are currently being evaluated.

While crop irrigation demands for reclaimed water are high, the potential also exists to use a portion of future reclaimed water flows for other urban uses, such as golf course irrigation or road median landscape irrigation. The amount currently set aside for urban uses totals 3,800 acre-ft. Several area agencies are currently evaluating opportunities to use this reclaimed water as it becomes available.

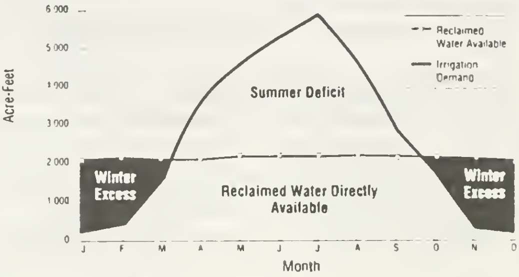


Figure 3: Reclaimed Water Availability and Use

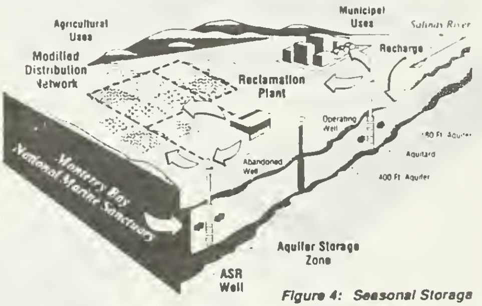


Figure 4: Seasonal Storage of Reclaimed Water

Table 1: Summary of Irrigation Demand and Reclaimed Water Availability (Acre-Feet/Year)

Category	1995 (23 mgd)[a]	Future (29 6 mgd)[a]
Total Castroville Irrigation Project (CIP) Demand	31 500	31 500
Total Reclaimed Water Available	25,800	33 200
- Reclaimed water available for CIP during peak irrigation season	17 600	21,300
- Reclaimed water available for storage or other uses[b]	8,200	11 900

[a] Average wastewater flow rate in million gallons per day

[b] Available during off-peak periods (primarily November through February)

Plans are currently underway to develop treatment, delivery, and distribution systems.

MRWPCA is currently in the preliminary design stage of its reclamation facilities These facilities will use the processes developed during the MWRSA project and approved by DOHS Downstream of the existing secondary treatment process, the following tertiary processes will be built chemical addition, flocculation basins, filters, and disinfection facilities Flow leaving the disinfection facilities will meet the DOHS health criteria. A small "balancing" reservoir will be provided to help match reclaimed water flow rates to daily fluctuations in irrigation demand The last component of the Reclamation Project is a transmission pipeline that will carry the reclaimed water across the Salinas River to the irrigation distribution system.

MCWRA is also currently in the preliminary design stage of its irrigation system. This system will consist of a network of smaller pipes, which will terminate at "turnouts" at approximately 150 farms. These turnouts will be designed to deliver a flow rate of 15 gallons per minute per acre of farmland served. The Castroville Project facilities will also include existing pumps and standby wells to supplement the reclaimed water supply.

Table 2: Sources of Project Funding

Source	MRWPCA Project	% of Total	MCWRA Project	% of Total
U.S. Bureau of Reclamation Loan	$20 540 000	75	$32 600 000	75
State Water Resources Control Board Loan	5 900 000	21	0	0
Other Financial Sources	1 000 000	4	$10 910 000	25
TOTAL	$27 440 000	100	$43 510 000	100

Funding for the two projects is expected to come from three sources (Table 2). MRWPCA and MCWRA are currently pursuing loans from the U.S. Bureau of Reclamation (BuRec) for their respective projects. The BuRec loans would cover approximately 75 percent of the cost of each project MRWPCA has also applied for a loan from the California State Water Resources Control Board.

Provided that the BuRec loan application is approved by October 1992, work will start at that time on the final design of the two projects, including pilot testing of the tertiary treatment processes. Facility designs could be completed by July 1993, with construction starting in October 1993 A 24-month construction period is anticipated.

Other implementation tasks currently underway include

- An investigation of aquifer storage and recovery funded jointly by BuRec and the local agencies
- An application to the Corps of Engineers for a Section 10 (404) permit for the Salinas River transmission line crossing

CASTROVILLE WATER DISTRIBUTION PROJECT LOAN

STATEMENT OF RICK ANTEL, CHAIRMAN OF THE BOARD, MONTEREY COUNTY WATER RESOURCES AGENCY

Mr. HILL. The next speaker will be Rick Antel.

Mr. ANTEL. Good afternoon, Chairman Johnston and Senator Feinstein.

Last, but not least, I am here on behalf of the Monterey County Water Resources Agency, regarding our Castroville water distribution project.

As a previous speaker mentioned, the Salinas Valley, which is our Nation's largest vegetable-producing area, is currently threatened by seawater intrusion at this time.

As we look forward to how to solve this seawater intrusion, we must look for new sources of water as much—as many areas of the arid Western United States. In looking to this, we must find conjunctive and beneficial uses that we can use water in this fashion.

Working together with the Bureau of Reclamation, our agency has identified a source of water that will be created by the tertiary treatment plant, located approximately 10 miles from the Castroville farming area.

By adopting the Castroville water distribution system and constructing it, we will provide an infrastructure to reuse this tertiary water. This will be an important first time that tertiary-treated water will be used on edible crops. And we look at it as being a possible model for the rest of the United States.

The other important thing regarding Salinas Valley is, to date, we have not imported any water from other regions within the State of California. We are totally dependent upon our ground water system and would like to remain that way.

By constructing this project and implementing other conservation methods, we will be allowed to do this. As this administration now moves forward in attempting to spur our county, we cannot lose sight of the fact that we must maintain what agricultural economy we do have in the Salinas Valley.

I stress "maintain," because at this time, without further resources of water, we are going to be forced into curtailing our agricultural activities, which means reductions in revenues and jobs that are much needed in our community.

We come to you for approval of our project and the continuation of the Bureau of Reclamation 84–984 loan program be continued, which will allow loans to agencies like ours that are subsequently repaid by the users of the water.

Thank you.

Mr. HILL. Thank you.

[The statement follows:]

STATEMENT OF RICK ANTEL

The Monterey County Water Resources Agency is a local government entity formed under the California Water Code. It is a agency with limited jurisdiction involving matters related primarily to flood control and water resource conservation, management, and development. Originally formed in 1947, the agency's initial actions were the construction of Nacimiento and San Antonio dams to replenish and maintain the Salinas Valley groundwater basin as a potable and irrigation water supply for the valley. However, while those projects met the objective in the upper portion of the valley, it became apparent in the late 1960's that an additional water supply would be necessary to slow or halt intrusion of seawater from Monterey Bay into the Salinas Valley groundwater basin.

During the past 25 years a number of studies and investigations have been completed by local entities as well as federal agencies. Solutions identified were not politically and/or financially feasible, until, during the past 10 years, a 16 member seawater intrusion committee developed a Seawater Intrusion Program that includes using reclaimed wastewater for the required additional water supply. However, the financial feasibility of this plan depends on the availability of federal funds through the Small Reclamation Projects Act (P.L. 84–984, as amended).

The project area is located in the Salinas Valley, on the central coast of California, near the town of Castroville. Seawater intrusion into groundwater aquifers has required the abandonment of wells and threatens agricultural production and the loss of a portion of rural America. If lands in the Castroville area go out of production up to 6,000 jobs could be lost. This would be in addition to the expected loss of 30,000 jobs when facilities at the nearby Fort Ord close. Currently unemployment in the Castroville area is more than 20 percent. Federal funding for this project will not only prevent the loss of jobs in the future but could create more than 2,000 jobs during the design, manufacturing, and construction phases of implementation.

Federal funds requested are a loan under the P.L. 984 program and will be repaid by landowners in the Salinas Valley. Assessment procedures are currently in place to collect funds required to operate the project and repay the federal loan.

Additional background information, project concepts, operational plans, and project costs are described for the Castroville Water Distribution Project and a companion reclaimed water treatment project (proposed by the Monterey Regional Water Pollution Control Agency) in the attached informational brochure. The expected source of funds required for the Castroville project are as follows:

Public Law 84–984 loan	$32,600,000
Other finacial sources	10,910,000
Total	43,510,000
Fiscal year 1994 request	5,410,000

Mr. HILL. Senator Johnston, that completes our testimony. And we are certainly, sincerely, appreciative of you and your—and, Senator Feinstein, for your courteous treatment over many years.

Thank you.

Senator JOHNSTON. Thank you very much, Mr. Hill. It was nice to have you back.

All statements that were submitted for the record, even for those who did not appear, will be part of the record.

Thank you very much.

ADDITIONAL PREPARED STATEMENTS

I am informed that the subcommittee has received prepared statements from other interested parties regarding certain California water resource issues.

Without objection, those will be made part of the record at this point.

[The statements follow:]

STATEMENT OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

INTRODUCTION

I am John Norman, General Manager of the Water Replenishment District of Southern California (WRD). I am here to ask your assistance in providing federal funding for a series of environmentally sound water quality and water supply projects. These projects are designed to improve local water quality and increase the use of local water resources. The projects will also reduce Southern California's reliance on scarce and costly imported water from Northern California and the Colorado River system. Knowledge gained from these projects will advance the state-of-the-art in the safe use of reclaimed water and will have immediate national and international applications.

DISTRICT BACKGROUND AND PURPOSE

The District, formerly known as the Central and West Basin Water Replenishment District, was formed in 1959 to manage the Central and West Coast Groundwater Basins located in Southern Los Angeles County. The District's service area encompasses approximately 420 square miles and includes a population of three and a half million people in 43 cities. The District's primary objectives are to replenish the groundwater basins, halt sea water intrusion, and provide quality groundwater for area residents.

Groundwater is an important source of water in southern Los Angeles County, comprising approximately 40 percent of demand. Groundwater reserves also provide an emergency supply of water during droughts, earthquakes, and other natural disasters that disrupt normal water deliveries.

In recent years, California has suffered through a prolonged drought resulting in severe restrictions on imported water supplies. This situation has made it extremely difficult to meet the needs of the state's growing population. California's water problems have also contributed to the general malaise of the local economy.

The concerns and challenges which face the District are formidable Searching for "new", more reliable, and less expensive water in the midst of the long-term drought situation, addressing the threat of contamination of the underground fresh water supply, and developing innovative methods to conserve local water resources are important issues on the District's agenda.

REPLENISHING THE BASINS WITH RECLAIMED WATER

WRD must purchase water imported through the State Water Project (northern California) or the Colorado River Project to artificially replenish the groundwater basins. Direct groundwater recharge is achieved through percolating water into the spreading grounds adjacent to the Rio Hondo and the San Gabriel Rivers, and further replenishment is accomplished by injecting imported water into a series of wells that form seawater intrusion barriers.

Highly-treated reclaimed municipal wastewater is also purchased to supplement imported water for spreading. Because of its lower cost and greater reliability of supply, this resource is an attractive alternative to imported water. WRD is currently the largest regulated user of reclaimed water in California. By reusing municipal wastewater, local resources otherwise lost to the ocean are conserved. Furthermore, by lessening the need for imported water from the Colorado and Sacramento Rivers, the environmental impact on these ecologically sensitive river systems is reduced. The District has several projects that address the expanded use of reclaimed water.

PROTECTING THE ENVIRONMENT THROUGH GROUNDWATER CLEANUP

The District is actively involved with projects related to the protection of the groundwater supply and cleanup of groundwater contamination. Years of "unregulated" manufacturing, industrial, and waste disposal operations have polluted the groundwater in the basins. Area groundwater is now threatened by contamination migrating into the Central Basin from the San Gabriel Valley as well as from isolated areas of existing local contamination. In addition, the long-term problem of entrapped saline water endangers the aquifers of the West Coast Basin.

WRD is dedicated to the protection and enhancement of groundwater quality in the Central and West Coast Basins. The District has, therefore, established a series of Clean Water Programs to safeguard groundwater quality. These programs foster removal of contaminants and prevent pollution to the groundwater.

GOALS AND PROJECTS

WRD has embarked on several projects and programs that promote the effective management and protection of its groundwater basins and serve to establish a state of self-sufficiency. These projects are aimed to evaluate the safe and beneficial uses of reclaimed water and to address the ongoing problem of migrating contamination. Through such programs, the District seeks to support conservation efforts by doing its part to tap the supply of reusable water available through the treatment of municipal wastewater and is working to find solutions to prevent or mitigate the complex problems involved with groundwater pollution.

The District's overall goal is to make better use of California's precious water resources and to protect and cleanup the basin aquifers from the environmental aftermath of years of pollution. With support at the Federal level, WRD believes that this program can be effectively realized, and the resulting benefits to the conservation and environmental efforts will be clearly revealed.

The following discussion presents a brief description and status of these projects. The corresponding costs associated with each is shown on the attached table. A more detailed outline is available for Committee review if so desired.

Montebello Forebay health effects study (epidemiological assessment of groundwater recharge with reclaimed water in Los Angeles County).—This study will assess the health effects of using treated municipal wastewater (reclaimed or recycled water) to recharge the groundwater supply in the Montebello Forebay area of urban Los Angeles County. A similar epidemiological study was conducted ten years ago. Since that time, the District has dramatically increased its use of reclaimed water. In the interest of public health, it is therefore necessary to conduct an updated epidemiological study.

To meet the highest standards of research, WRD has contracted with the Rand Corporation to conduct the study. The results of this evaluation may potentially justify the increased use of reclaimed water. The findings on the epidemiological effects of reuse may offer the necessary foundation to support the virtues of using reclaimed water as a sensible supplement to traditional sources and will undoubtedly have implications not only on the District's operations but on water reuse issues around the world.

The knowledge gained from this study will aid in the safe and beneficial use of recycled municipal wastewater throughout the United States and will promote the understanding of the health effects of reclaimed water.

Phase I of the study began in February, 1993 and will take approximately 21 months to complete. This phase has been budgeted at $372,000. Phase II, which will begin upon completion of the first phase (November, 1994), is expected to cost $400,000 and will take two years to complete.

Recycled water nitrate study (WRD/USGA nitrate remoral study.—This study, jointly administered with the U.S. Geological Survey (USGS), will investigate the fate of nitrates in treated municipal wastewater as it moves down through the soil to recharge groundwater basins. It is presumed that bacterial action in the soil partially reduces nitrates to nitrogen gas, thereby reducing the amount of nitrates entering the groundwater. If so, the evidence should further promote the use of reclaimed water and further establish a sound scientific basis for the practical use of this resource.

The information gleaned from this study will aid in the safe and beneficial use of recycled water throughout the United States. It will also preserve environmental integrity by promoting natural nitrate removal and less reliance on imported water resources.

The study is estimated to have an annual cost of $130,000 and is expected to take four years. Site construction is nearly complete and program monitoring is scheduled to begin in April, 1993. Monitoring and evaluation will continue for four years.

Wellhead treatment program.—District groundwater supplies are threatened by local areas of contamination. Due to the economic recession in California, many groundwater pumpers are unable to finance construction of needed wellhead treatment facilities to clean up degraded water supplies. In this program, the District will provide either equipment or financial assistance to groundwater pumpers to construct wellhead treatment facilities to pump and remove contaminants in water extracted from the local groundwater basin.

This program will benefit the environment through the removal of contaminants from the groundwater supply and will avoid the abandonment of active production wells. It will also make local groundwater reserves available which would otherwise be lost to contamination. The program also reduces the burden on financially stressed California cities and water companies with well water contamination problems.

Each wellhead treatment facility will cost between $175,000 and $500,000, and each project will take approximately 12 months to complete. An estimated 18 facilities will be needed at a cost of approximately $7 million. Construction will begin in spring and summer of 1993 for two facilities costing $300,000 and $415,000, respectively.

Alamitos barrier recycled water project.—Imported fresh water is injected into the Alamitos Barrier, located in Long Beach, California, to prevent intrusion of seawater into the local groundwater basin. This project proposes to substitute highly treated municipal wastewater for the imported water currently used in the barrier's injection wells. The project will consist of a reverse osmosis water treatment plant and ancillary structures to convey the treated water for injection. Phase I of this project will provide sufficient recycled water to substitute 50 percent of the imported water. Phase II will expand the treatment plant to provide 100% substitution of imported water. WRD, the Orange County Water District, and the City of Long Beach are jointly involved in the project.

The information gathered from this project will promote the safe and beneficial use of recycled water throughout the United States. Furthermore, the increased use of recycled water will lower the dependence on scarce and expensive out-of-state and Northern California water resources and promote a greater reliance on local water. The environmental benefits include the conservation of water and a reduction in the amount of municipal wastewater dumped into the ocean.

Land rights and the cost of recycled water are currently being negotiated while environmental documentation will be completed in mid-1993. Phase I of this project will cost an estimated $25 million. Design and construction will begin in late 1993 and will take two and a half years to complete. Phase II will cost an estimated $10 million with design and construction beginning in 1998 and taking one year to complete.

Montebello Forebay recycled water advanced treatment project.—This project seeks to increase the amount of reclaimed water used to replenish the groundwater basin. The project involves the use of advanced processes to treat municipal wastewater an extra degree prior to discharge. The added level of treatment will allow an increased use of reclaimed water for replenishment. Phase I of this project involves the construction and operation of a pilot plant at the Whittier Narrows Water Reclamation Plant (WNWRP) in the City of Pico Rivera, in Los Angeles County, California. The pilot plant will determine the preferred alternative between two advanced wastewater treatment options using granular activated carbon (GAC). Operational reliability as well as design information for a full-scale GAC facility will also be established. Phase II of the project will include the design and construction of a full-scale facility that can produce 10,000 acre-feet per year or retrofitting the existing gravity effluent filters at the plant.

This project will promote the safe and beneficial use of recycled water throughout the United States. The increased use of recycled water, which would normally be dumped into the ocean, will lower the dependence on scarce and expensive out-of-state and Northern California water resources and encourage a greater reliance on local water. Use of local water resources reduces demand on imported water from the environmentally sensitive Sacramento River Delta and Colorado River Systems.

Phase I of the project will cost an estimated $115,000 for design, construction and water quality analysis and is currently in progress. The pilot study is expected to be completed in July, 1993. Phase II will cost an estimated $9 million for design and construction and is expected to begin in mid-1993. This activity will take two and a half years to complete.

West Basin Saline Plume Monitoring Program.—This program is the first step in actively addressing the saline plume problem in the West Coast Basin. A proposed monitoring program would provide better understanding of the saline contamination in local groundwater aquifers inland of the West Coast Basin Barrier. This program would entail the construction of four monitoring wells to gauge the extent of the saline contamination in the groundwater.

The results of this monitoring program will promote a better understanding of saline plume migration and groundwater degradation throughout the nation. Furthermore, the knowledge gained from the monitoring will aid in halting further degradation.

The design and construction will cost an estimated $600,000, will take six months to complete, and is expected to start in mid-1993.

REQUESTED FEDERAL FUNDING

Project name	Fiscal year—			
	1994	1995	1996	1997
Montebello Forebay health effects study	$372,000	$200,000	$200,000	
Recycled water nitrate study	130,000	130,000	130,000	
Wellhead treatment program	1,375,000	1,500,000	2,050,000	$1,300,000
Alamitos barrier recycled water project	3,000,000	18,000,000	2,000,000	
Montebello Forebay recycled water advanced treatment project	1,350,000	7,650,000		
West basin saline plume monitoring program	600,000			
Total project costs	6,827,000	27,480,000	4,380,000	1,300,000

STATEMENT OF THE FRIENDS OF THE RIVER

Dear Chairman Johnston, today you will be receiving testimony from the California Water Commission on their recommendations for Corps of Engineers and Bureau of Reclamation project funding in California. Among these expenditure recommendations are funding for studies and design of flood control works in the Sacramento area—including the controversial Auburn Dam. You may also be receiving some additional recommendations from the Sacramento Flood Control Agency.

Friends of the River was a leader in the group of local, regional, and national conservation groups that helped to convince the United States Congress to reject legislative authorization for Auburn Dam in a decisive vote in the House of Representatives late in the 102nd Congress. Our testimony today focuses on the ongoing federal activities affecting the American and Sacramento Rivers near Sacramento.

SACRAMENTO FLOOD CONTROL AGENCY NATOMAS LEVEE PROJECT

The Sacramento Flood Control Agency (SAFCA) may request federal funding for the Natomas Levee Features authorized in the DOD appropriations bill of 1992. Federal funding for this levee construction project is not authorized under the terms of this appropriations bill. Federal authorization was conditional; these levee works are only authorized if "construction does not encourage the development of deep floodplains." The Natomas floodplain is very deep—and SAFCA's Levee Features environmental document states that the project will induce development in the now largely unoccupied Natomas Basin by reducing the frequency of catastrophic flooding in Natomas enough to comply with minimum FEMA standards. At the same time, this levee work will not reduce the severity of flooding from less frequent but reasonably foreseeable floodplain flooding events.

Moreover, Sacramento area land use planning decision makers have not made any attempt to comply with the terms of the Federal authorization. Instead, in the two months immediately after the passage of the authorization language, Sacramento area land use planners signed development agreements and adopted land use plans that could result in over 170,000 people moving in to an area subject to 10 to 20 foot flood depths. Clearly, the Congressional intent to provide Sacramento area decision makers with a tool and a carrot to enhance the flood safety of 30,000 residents in Sacramento's most hazardous area while preventing further disastrous planning mistakes has been rejected—without any serious public debate or dialogue on the prudence of an action that will result in the loss of perhaps thousands of lives and the ultimate destruction of tens of billions of dollars of property.

If SAFCA requests federal funding from the subcommittee, please note that SAFCA is not anticipating cost sharing from the State of California. The State testified at Interior Committee hearings last year about the serious risk of a limited flood control project. These flood control projects will permit local planners to replace empty rice fields with people in the 55,000 acre Natomas flood basin. Such actions are not the intent of the DOD legislation.

Clearly Sacramento has not complied with the terms of the federal authorization for these levee works. The terms reflect the very appropriate concern of Congress that federal monies should not be used to exacerbate the consequences of inevitable flooding. Until Sacramento decision makers confront this issue squarely and successfully, federal monies cannot be made available.

CWC RECOMMENDATIONS

The California Water Commission recommends a number of projects in the Sacramento area. We have the following comments on their proposal:

- —The $6,000,000 construction appropriation for the Sacramento Urban Levee Restoration Project appears to be warranted. This project would rebuild the river wall that protects downtown Sacramento from a Sacramento River levee failure. City engineers believe that the river wall is experiencing structural failure problems and appears to have been seriously under-engineered when it was originally designed.
- —The $1,000,000 preconstruction engineering and design appropriation for West Sacramento is consistent with the levee upgrade authorization Friends of the River supported in the National Water Resources Development Act of 1992.
- —The $5,850,000 construction appropriation for the Sacramento River Bank Protection and Sacramento River Flood Control Project deserves careful review. We fear that this money will be used for its traditional purposes of "hardening" levees on the Sacramento River between Colusa and the City of Sacramento.

Friends of the River has long disagreed with the nature of the Corps levee work on the Sacramento River. After decades of work and almost $200,000,000 in accumulated Corps expenditures on interior California's largest river, much of the Sacramento River has been confined to a narrow channel with levees immediately above the bank of the river.

These actions have compromised public safety by exposing the levees to failure from undercutting from eroding river banks while at the same time eliminated much of the Central Valley's riparian forest. A new approach, which involves setting the levees back from eroding river banks, is needed. In recent years, the U.S. Fish and Wildlife Service has begun to take the kinds of actions on the Sacramento that may one day lead to this safer and more environmentally sensitive approach.

In view of this pending change of levee work philosophy, significant new "hardening" expenditures should be scrutinized very carefully. Environmental restrictions imposed by state and federal natural resource agencies may prevent these expenditures; and "hardening" areas that may eventually be set back may not be an efficient way to spend the federal treasury.

The $2,000,000 preconstruction engineering and design appropriation for the American River Watershed Investigation appears to be consistent with the Department of Defense Appropriations bill legislative authorizations carried by Representative Fazio last year. Our direct negotiations with Representatives Fazio and Matsui offices refined and added a flood management plan to this bill. As a result, Friends of the River, the Environmental Defense Fund, the American River Coalition, and the National Wildlife Federation withdrew its opposition to Mr. Fazio's original amendment proposal to the Conference Committee.

As a result of our recent discussions with the California Reclamation Board and the District Office of the Corps of Engineers, it appears that the fiscal year 1994 expenditures will be spent on the studies begun in fiscal year 1993. This is appropriate since some of the essential features needed to enhance Sacramento's flood control system will take more than one year to complete. In spite of our continued frustration with the usefulness of the Corps' work, there is hope that some of these studies—particularly the flood management plan and Folsom Dam outlet work studies may quickly result in productive, cost-effective improvements to Sacramento's ability to successfully weather high flows on the American and Sacramento Rivers.

Nevertheless, we continue to have considerable reservations about the utility of some of these federal expenditures. Many of the studies authorized and funded in 1992 are unlikely to result in environmentally viable flood control enhancement approaches or facilities. Furthermore, preconstruction engineering and design studies for a project with an identified preferred alternative that has already been rejected by the House (Auburn Dam) is an awkward if not impossible format to study and present other "non-dam" approaches and facilities to Congress. It is more than likely that some of these new approaches may need investigation funding rather than preconstruction engineering and design funding.

LETTER FROM RONALD M. STORK, ASSOCIATE CONSERVATION DIRECTOR, FRIENDS OF THE RIVER

FEB. 8, 1993.

Re restoration (AR) zone guidelines/regulations for Sacramento

JOHN MATTICKS,
Assistant Administrator, Office of Risk Assessment, Federal Insurance Administration, Washington, DC.

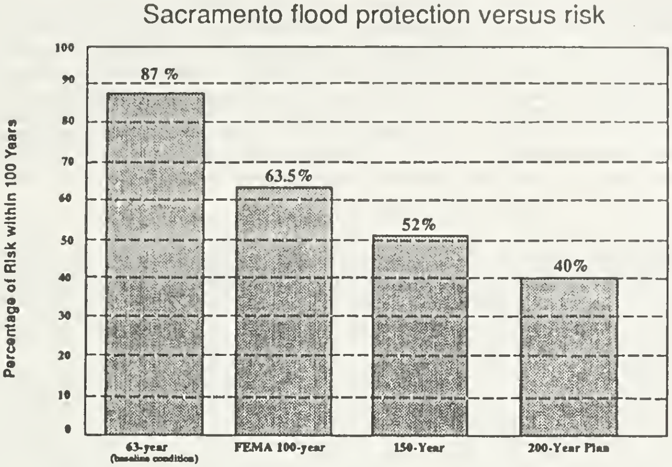
DEAR MR. MATTICKS: Last week we received a copy of the Sacramento Flood Control Agency's (SAFCA) suggestions for draft AR zone guidelines. We understand that in the near future the Federal Emergency Management Agency (FEMA) will be issuing draft or preliminary regulations to establish flood management criteria for the new AR zone designation. We believe, as does SAFCA, that the City of Sacramento and the Counties of Sutter and Sacramento will be applying for classification within the AR zone for much of Sacramento and the Natomas Basin.

We have two fundamental disagreements with SAFCA's underlying assumptions in their comments to your office.

SAFCA's first assumption is that Sacramento faces a "relatively short duration of the flood risk" because within about 1 to 3 years firm agreements for the reoperation of Folsom Dam and contemplated improvements to the area's levee system will permit a remapping of much of the Sacramento and the Natomas Basin outside the 100-year floodplain.

SAFCA's second assumption is stated very directly in their letter to you: "We believe the intent of the legislation is to permit FEMA more discretion in developing floodplain management criteria in undeveloped floodplains with flood depths exceeding five feet."

The assumption of limited risk is based on the de facto adoption of the legal and planning fiction that Sacramento's "flood risk" will end with "flood control." There has been little recognition by Sacramento area land use planners that all of the "flood control" projects currently proposed for Sacramento continue to expose area floodplains to substantial long term risk of levee failure. (See Figure 1)



Plot of protection level versus risk of larger event occurring within a 100-year period. Using Corps of Engineers methodology, Sacramento is exposed to a 72 percent risk under the FEMA 100-year storm event definition. The Corps' 200-year plan without levee/channel upgrades provides *less* than 200-year protection due to less reliability.

adapted from: *A Review of Key Issues from the American River Watershed Investigation*_ March 1992.

figure 1

Some areas of Sacramento, such as the Natomas Basin, have flood depths resulting from breaching levees connected to the American and Sacramento Rivers that average 15 feet; some sections are near twenty feet. Deep flooding in developed areas will have catastrophic effects on life and property in these areas. The recognition of these circumstances has not been incorporated in the planning direction for area development plans.

Based on Sacramento's perception of a limited window of risk, Sacramento area planners have assumed that once minimum FEMA standards are achieved, it is safe (bordering on inevitable) to permit the development of unfloodproofed structures on 50,000 currently undeveloped acres in the 55,000 acre Natomas Basin. Since future "safety" for the Basin is anticipated, they have urged you to adopt regulations that permit waivers of building elevation requirements so that the plans of the City and two Counties to build in the Natomas floodplain can go forward as if the Basin will not someday experience catastrophic flooding.

Consistent with this view, SAFCA requested that "infill" exemptions to floodproofing requirements in deep AR zones be extended to areas with "approved general plans" and "approved community plan areas" (such as the 9,000 acres of the City of Sacramento's largely undeveloped North Natomas and undeveloped areas in South Natomas). They also ask that "parcels subject to an existing assessment district formed to provide public facilities on a community-wide basis" be included in the definition of "infill." In effect, the entire Natomas Basin would qualify as "infill," since Reclamation District (RD) 1000 is an assessment district.

While consistent with the views of area planners that in recent months have approved developments that may ultimately place as many as 150,000 people and billions of dollars in improvements in the hazardous Natomas Basin, SAFCA's suggestions are inconsistent with the law, the intent of Congress, and common sense. The legislative history of the AR zone legislation says: The Flood Restoration (AR) zone is not intended to allow the development of undeveloped areas including the Natomas Basin in Sacramento." The Congressional authorization of the Natomas Levee Features portion of the American River Watershed Investigation Project, was conditional—"provided that such construction does not encourage the development of deep floodplains." Recent actions by area decision makers have ignored that provision—they appear to be firmly committed to developing the hazardous Natomas Basin. In effect, Sacramento area decision makers have already rejected the terms of the Congressional authorization that would have provided a federal role in an essential element of the flood control works needed to provide the Natomas Basin, and its existing 30,000 residents, with 100-year or greater flood protection.

In the absence of prudent policy actions by local planning jurisdictions, we urge you to take a very rigorous line with Sacramento City and County and Sutter County attempts to escape AR zone floodproofing requirements. There is no Congressional direction to implement lax floodproofing requirements. (Indeed Congress has specifically indicated the need for rigorous implementation of floodproofing requirements in the Natomas Basin.) In the absence of Congressional authorization of a flood control restoration project, it is uncertain when or if the 100-year minimum FEMA standards will be achieved (particularly in Natomas). More importantly, FEMA and local planners need to recognize the desirability and long term cost effectiveness of floodplain floodproofing for any developments even after "flood control" for Sacramento and the Natomas Basin is achieved.

In these circumstances, FEMA needs to do more than rigorously enforce minimum flood management criteria for Sacramento area AR zones. The Agency needs to strongly recommend to Sacramento area decision makers that they adopt floodplain management criteria for Sacramento floodplains that recognize the desirability of avoiding growth or types of construction that will suffer catastrophic losses when the Sacramento or American River levees are breached—whether these floodplains are in AE or AR zones, or outside of them in the so-called "safe" areas.

While our comments today are focused on the issues specific to the Sacramento area deep floodplains, they are surely applicable to many other parts of the country. FEMA needs to begin to build a National Flood Insurance Program (NFIP) that recognizes that severity of foreseeable flooding is just as important as the projected frequency of flood events. We hope to eventually see a NFIP that consistently helps local decision makers to avoid putting more lives and property at risk in flood prone areas. This is a formidable regulatory and political challenge, but it is one that the Agency needs to embrace.

LETTER FROM RONALD M. STORK, ASSOCIATE CONSERVATION DIRECTOR, FRIENDS OF THE RIVER

FEB. 4, 1993.

COL. LAURENCE R. SADOFF,
District Engineer U.S. Army Corps of Engineers, Sacramento, CA.

DEAR COLONEL SADOFF: On January 21, 1993, the Sacramento Flood Control Agency (SAFCA) Board of Directors approved a resolution to begin work on a number of flood control projects and management strategies to improve flood safety in Sacramento.

NATOMAS LEVEE FEATURES PROJECT

One of these projects is the construction of SAFCA's "Revised Local Project," which involves levee work on some of the drainage levees that serve the Natomas Basin. These flood control improvements would be designed to permit the Natomas East Main Drain and Natomas Cross Canals to continue to discharge tributary flows into the American and Sacramento Rivers during events when water surface elevations on these rivers are presently high enough to prevent these discharges. An important element of this plan is to prevent failure of these levees so that high American and Sacramento River flows don't break through these internal flood control works and flood the Natomas Basin.

The "Local Project" is a modification of the Natomas Levee Features portion of the American River Watershed Investigation Project. These features were authorized, subject to certain conditions by the 102nd Congress in Department of Defense Appropriation Bill in October of 1992. One of those conditions is "that such construction does not encourage the development of deep floodplains."

FEDERAL AUTHORIZATION

Conditional authorization was approved on the basis of testimony from the State of California, SAFCA, and members of the American River Coalition. Congress was concerned that authorization of flood control works to reduce the frequency (but not the severity) of catastrophic flooding in large and currently undevelopable agricultural areas, might encourage local planners to open up the Natomas Basin to extensive urban development, ultimately exposing billions of dollars of property and hundreds of thousands of people to risks that currently are safely experienced by fallow rice fields. In effect, the authorization was intended to enhance flood safety for the 10 percent of the Basin currently inhabited, but to discourage further increases in populations at risk of serious flooding.

The budget for the "Local Project" presented to the SAFCA Board of Directors includes $5.3 million per year in federal cost sharing for the next three years. This is consistent with the analysis prepared by SAFCA staff and presented to the SAFCA Board of Directors on December 10, 1992 and January 21, 1993. They asserted that "[w]ith slight modifications, the project could be completed for about $32 million, of which $16 million would qualify for Federal reimbursement." No mention was made in the SAFCA analysis that federal monies or credits were contingent on the adoption of measures to ensure that the project would not encourage construction in the Natomas Basin (a notably deep floodbasin).

CITY AND COUNTY ACTIONS

SAFCA is not the only local government to fail to recognize the conditional federal authorization of the Natomas Levee Improvements. The Sacramento City Council approved a comprehensive land use plan for the commercial and residential development of North Natomas, a 9,000 acre area within the Natomas Basin, on November 5, 1992—one month after the Congressional action on the Defense Appropriations Bill. In December of 1992, the lame duck Sutter County Board of Supervisors, approved 18 development agreements on 25,000 acres in the northern portion of the Natomas Basin. The anticipated population for this area is over 110,000 people—in an area whose population is currently in the hundreds.

According to SAFCA, the "local project" will result in extensive further development of floodplains in the Natomas Basin. SAFCA's 2/1/93 'Notice of Preparation of the project's environmental impact report states: "Finally, the Revised Local Project would result in virtually the same cumulative impacts as are described in the Joint EIS/EIR and the Draft EIR. The revised project is considered growth-inducing even without upstream improvements because it calls for containing up to 180,000 cfs flows in the lower American River. This design would permit the levees in the project area to meet minimum FEMA criteria. Assuming ongoing efforts to reconstruct the east levee of the Sacramento River are completed as planned, the Revised Local Project would permit the project area, including the undeveloped portion of the Natomas Basin, to be remapped out of the 100-year floodplain, thereby eliminating the floodplain management restrictions which might otherwise constrain development of the area in accordance with approved local land use plans."

ACTIONS BY THE CORPS OF ENGINEERS

Has the Corps of Engineers made any commitments to fund, participate, or provide credits to SAFCA for the federal share of the Natomas Levee Features Project? Under what appropriations authority does the Corps intend to fund the federal share of the SAFCA project? Does it or other parties intend to seek additional authorization or appropriations authority to fund this project?

How does the Corps intend to determine whether Sacramento City, County, and Sutter County jurisdictions do not permit new construction in the Natomas Basin if the Natomas Levee project (combined with other Federal actions) opens up the floodplain to development by meeting minimum FEMA insurability and floodplain flooding frequency criteria? Does the Corps intend to notify local decision makers of the new statute, and the federal criteria for making federal monies available for the federal share of the Natomas Levee Features Project?

ATTACHMENT 1
Amended 12/8/92

Table 1

SACRAMENTO AREA FLOOD CONTROL AGENCY
PROPOSED FIVE YEAR ACTIVITY SCHEDULE
AND ESTIMATED FUNDING REQUIREMENTS

	92-93	93-94	94-95	95-96	96-97	TOTAL
Local Project (Natomas Project)	1,500,000	9,300,000	9,300,000	9,300,000	2,600,000	32,000,000
Less: Federal cost sharing		(5,333,333	(5,333,333)	(5,333,334)		(16,000,000)
Net SAFCA Cost	1,500,000	3,966,667	3,966,667	3,966,666	2,600,000	16,000,000
Sacramento Urban Levee Reconstruction Project	500,000	600,000				1,100,000
Less: State and Federal cost sharing		(450,000)				(450,000)
Net SAFCA Cost	500,000	150,000				650,000
Sacramento Riverwall Reconstruction		2,000,000	2,000,000			4,000,000
Less: State and Federal cost sharing		(1,500,000)	(1,500,000)			(3,000,000)
Net SAFCA Cost		500,000	500,000			1,000,000
Beach Stone Lakes Levee Upgrade		1,750,000	1,750,000			3,500,000
Flood Management Plan	25,000					25,000
American River Studies						
Upstream Reservoirs	25,000					25,000
Canyons	25,000	*100,000*				*125,000*
Folsom Dam and Reservoir	75,000	75,000				150,000
Lower American River	75,000	75,000				150,000
FEMA - Floodplain Mapping	150,000					150,000
Folsom Reoperation						
Litigation	60,000	60,000				120,000
Planning	200,000	200,000				400,000
Operation		4,500,000	4,500,000	4,500,000	4,500,000	18,000,000
Administration -- Staff, general consultants, Legislative consultant, assessment district administration, general office costs	1,800,000	1,836,000	1,873,000	1,910,000	1,948,000	9,367,000
Debt Service	2,356,893	719,000	719,000	719,000	719,000	5,232,893
TOTAL	6,791,893	*13,931,667*	13,308,667	11,095,666	9,767,000	*54,894,893*

(From the Pacific Discovery, Winter 1993)

MAKE THEE AN ARK

"NEARLY EVERY HOUSE and farm over this immense region is gone. There was such a body of water – 250 to 300 miles long and 20 to 60 miles wide, the water ice cold and muddy – that the winds made high waves which beat the farm houses in pieces. America has never before seen such desolation by flood as this has been, and seldom has the Old World seen the like. But the spirits of the people are rising, and it will make them more careful in the future. The experience was needed. Had this flood been delayed for ten years the disaster would have been more than doubled."

SO WROTE EXPLORER William H. Brewer after the floods of January and February 1862, which so deeply submerged parts of the Sacramento Valley that the tops of telegraph poles were underwater and cattle 14 miles from the river were being rescued by steamers.

But what exactly did the people learn from the experience? Certainly they didn't learn not to build in the floodplain of the Sacramento and American rivers, as the location of the city of Sacramento attests. Instead, they responded in a manner that was thoroughly Western: conquer that which threatens.

By the winter of 1986, many levees and a few dams later, the disaster that imperiled the 300,000 people who inhabited the low-lying capital of California was larger by many orders of magnitude than anything William Brewer might have envisioned. A major storm had hit northern California. Floodwaters surged down the river, and a 235-foot-high cofferdam built just upstream of Sacramento on the American River collapsed. The water surged on, threatening to overtop Folsom Dam, and rose high on the levees that protect the state capital.

A fortunate turn in weather forestalled the imminent tragedy, but the specter had been raised. Once again, rather than questioning their planning acumen, people began talking about bigger and better ways to control the rivers. Once again, a dam was proposed, this one for a site just below the confluence of the North and Middle forks of the American River near the town of Auburn, despite the fact that an earlier version of the dam had been stalled in mid-project because, among other things, it was located on an earthquake fault.

The proposal to build a $698-million flood-control dam at Auburn was defeated last September, when Congress eliminated it from a water resources bill, thus saving 34 miles of the American River that the U.S. Fish and Wildlife Service calls riparian and canyon habitat of statewide and national significance. But almost no one believes the project is permanently buried.

The politics that killed the latest dam project were unusual: it was opposed by environmentalists, who were trying to save the river, but it was also opposed by water-and-power advocates, who objected to the project because it was aimed solely at flood protection and would remain dry at other times. They're pushing for an enormous multi-purpose dam.

But the politics will be different next time. For one thing, more pressure to build a flood-control dam is almost certain to come from the 150,000 or more people that developers envision will be living in an area called Natomas, just north of Sacramento. Known as "the bathtub," because it is so low-lying that flood waters are drawn into it, these 55,000 acres of agricultural land were once a highly productive natural marsh that flooded regularly to depths of up to 25 feet. Over the previous century, it has been "reclaimed" by levees, which ward off the Sacramento River to the west and the American River to the south. And in the last 15 years the southern edge of the basin has become home to 35,000 people.

I DROVE OUT TO the Natomas basin about a week after Congress rejected the dam at Auburn. My curiosity was piqued by the words of Congressman Jim Jontz of Indiana, who objected to the project and told his colleagues on the House floor that "one of the things that Auburn Dam will be protecting is prime undeveloped real estate in an area adjacent to Sacramento.... What we are being asked to do is to spend money to allow development to occur in an area where it could not now occur." And, many might argue, should not occur for fiscal, public safety, and ecological reasons.

The fields stretch out in a mosaic of tawny browns and vibrant greens, veined with irrigation and flood-control ditches and trisected by major highways. Planes take off and land at Sacramento Metropolitan Airport, sharing the air routes with red-tailed hawks and magpies. Despite the degree to which the landscape has been altered by dikes, and the consequent loss of once abundant seasonal wetlands and vernal pools, the U.S. Fish and Wildlife Service found that thousands of acres of flooded rice fields provide significant habitat for wintering waterfowl – geese, swans, and shorebirds – as they traverse the Pacific Flyway.

But it's also a developer's dream. The land is flat for miles, accessible to two major interstate freeways, and a ten-minute commute from downtown Sacramento. You could build a city the size of Washington, D.C., here: but the odds are it will be submerged under 20 feet of water sometime within the next century.

Sacramento City Council member Heather Fargo says that just before the

> 1986 floods, when everyone was certain Natomas had adequate flood protection, the basin was rezoned from agricultural to residential/commercial. Land prices soared a hundredfold, from $2,000 to $200,000 an acre. Then came the 1986 floods and a reevaluation by the Corps of Engineers, which determined that rather than having the hundred-year flood protection demanded by the federal government for disaster insurance, the Natomas area is subject to major floods an average of once every 63 years. The federal government placed a moratorium on residential building in Natomas until flood protection was strengthened, and Sacramento threw its civic energy into getting a dam built at Auburn.
>
> The flood-control dam that was defeated in September would, in theory, have provided protection to Natomas residents against a "two-hundred-year flood" (a flood of such magnitude that it occurs, on average, once every two hundred years). The non-dam alternative, building higher and more reliable levees and operating the existing Folsom Dam more for flood protection than for sales of water and power, will only provide protection against a 100- to 150-year flood.
>
> But, dam or no dam, should Sacramento be expanding into the lowest-lying basin around? Flood protection only provides a false sense of security. Time and again we've seen the best estimates about structural flood protection proved wrong. The consequences of such an error would be catastrophic if 150,000 people are as submerged as William Brewer's telephone poles next time the

river floods. It's bad enough that much of Sacramento would already be three feet deep. Should federal taxpayers be subsidizing such an obvious risk?

Development in Natomas will also eliminate prime agricultural land and result in a significant loss of wildlife. It will contribute anew to pressure to build a flood control dam at Auburn, thus imperiling one of only a handful of California rivers that remain in a relatively natural, free-flowing state.

Heather Fargo, who once sued to stop development and now represents Natomas on the city council, agrees that these are good points, but says they should have been made in 1978, before 35,000 people moved into south Natomas and land speculation had begun in the rest of the basin. Now, she says, it's too late. There's too much money invested and the city couldn't possibly compensate developers for their losses if it banned building in Natomas. Besides, the people who already live there need protection.

"Our argument is that development is probably going to occur out there, and there's not a lot we can do about it, so we might as well get as much flood protection as we can," says Tim Washburn, the attorney for the Sacramento Area Flood Control Agency. "This battle is not going to go away."

Clearly not. But adding thousands more victims to the inevitable catastrophe will only make it that much worse. One hundred and thirty years ago, William Brewer thought experience would lead us away from disaster. Once again, he's being proved wrong. Despite overwhelming evidence to the contrary, we still think we can ignore the obvious and control nature.

(From the San Francisco Chronicle, Jan. 4, 1993)

NEW SUTTER COUNTY SUPERVISORS OPPOSE BUILDING PLANS

By Ann Bancroft
Chronicle Correspondent

Yuba City

Sutter County's bitterly fought plans to develop 25,000 acres of agricultural land into four futuristic new towns may be detoured after three new supervisors who oppose the plan are sworn in to office tonight.

Three of the five incumbents on the Board of Supervisors were defeated in November by opponents urging a countywide vote on plans to develop the area. After the election, the lame duck board scrambled to approve development agreements that cover 11,000 acres, plus a freeway interchange leading to the project.

"Things will be drastically different" when the new board takes over, vowed Supervisor-elect Dick Akin, whose 1,500-acre rice and sugar beet farm is 10 miles west of the 1,071-acre Sutter Bay Village site, the first of the proposed new towns. "The new board is definitely going to slow down the development."

Akin said the new supervisors will challenge the legality of their predecessors' bypassing normal planning procedures to swiftly approve the development agreements.

Farmers in the area who want to sell their land for development, however, say the actions of the old board guarantee their right to do so.

The long-simmering issue has created what some refer to as a civil war in the county and spawned two initiatives that will be on the June ballot.

Proponents look to the master-planned, high-tech development proposal as a national model for attracting startup industries, preventing ugly sprawl and providing jobs in a county where unemployment sometimes climbs as high as 25 percent.

Opponents fear it will destroy valuable farmland and infringe upon rural lifestyles, while turning Yuba City, the county's current population center, into a poor stepsister removed from a powerful new urban hub.

Bay Area Boosters

The plan is the dream of two Bay Area men — William Falik, a prominent land-use lawyer, and Jonathan Cohen, a real estate lawyer and environmental planner — who own 6,000 acres of the development area and have invested $40 million in a joint venture with Ahmanson Developments Inc., the home building subsidiary of Home Savings of America.

Sutter Bay Village, the first phase of the plan, would include 3,600 homes, about 10,000 people, an 18-hole golf course and country club, waterways, a park and 100 acres zoned for light industry and aimed at providing 6,000 jobs. The homes would be linked to a fiber optics/cable network allowing easy computer hookup to video conferencing, data bases, shopping and national library services.

"We'll be a national laboratory for President Clinton's idea of new infrastructure to improve the economy," said Falik, who believes the fiber optics network — allowing simultaneous, instant transmission of hundreds of data signals — will attract "incubator" telecommunications industries to the area.

Some Sutter County residents, however, and at least the three new members of the five-member Board of Supervisors, think such notions of transforming the conservative, sparsely populated area into a laboratory for 21st century living is premature at best.

"I do believe the population increase is inevitable," said Supervisor-elect Joan Bechtel, a retired family-law lawyer, "out having a whole new community in the south county is not natural growth. I think most people in Sutter County thought growth would emanate from Yuba City," about 30 miles from the county's southern border.

Bechtel said she opposes action on the development until after voters decide in June on referendums concerning both Sutter Bay Village and the county's general plan for the new towns.

Planning Commissioner Bruce Coupal, a lifelong resident of Sutter County and the one opponent of south county growth on the county's six-member Planning Commission, fears that the Sutter Bay project would lead the area down the path of "leapfrog" development, and spawn the sort of traffic-congested sprawl that has developed in Santa Clara, Fresno and San Joaquin counties.

Rice farmer Chris McKenzie of Pleasant Grove, whose land is included in one of the development agreements approved by the outgoing board, disagrees. The new board risks losing a "Cadillac plan" with ample open space and schools financed by the developers, he said, if the Sutter Bay proposal is scuttled.

"I hate the idea of people running all over the places my Dad and I farmed," McKenzie conceded. "It just became apparent to me that things aren't going to remain the same. At least with this plan, the developers pay for the (open space) buffer between my farm and their development, and farming is allowed as long as possible."

The developers hoped to sell the Sutter Bay homes in 1995 but fear that the new board might force delays.

(From the Sacramento Bee, Jan. 4, 1993)

SUTTER THROWS OUT NEWTOWN PACTS

By Gary Delsohn
Bee Staff Writer

YUBA CITY – Sutter County, which had ambitions of cashing in on Sacramento's rapid growth with a massive "Newtown" north of the city's airport, threw out 18 approved contracts with developers Wednesday in a tumultuous Board of Supervisors meeting.

Taken after a chaotic two-day meeting, the action came in the board's first public session since its pro-development majority was replaced with three supervisors opposed to wide-scale development in south Sutter County.

Although the board action puts the future of the multibillion-dollar development project in doubt, Newtown could be revived by the courts or a public vote in June.

Developers and their lawyers, as well as landowners hoping to build on their property after winning county approval during a complex four-year planning process, were outraged by the stunning turn of events.

They threatened to sue over what they claimed was the board's illegal action and to recover millions of dollars they've already invested in development plans in the mostly rural county.

"This was a kangaroo court," charged William Falik, a land-use lawyer and principal in Sutter Bay Associates. The Bay Area company has led the move to turn 25,000 acres of rice farms into a new city whose ultimate population they projected at 110,000.

"It shows a total lack of law. It was an arbitrary and capricious abuse of police power in the first act of governance by a new board. I have advised counties and local governments in Northern California for 22 years and I have never seen a board of supervisors act as irresponsibly as this one."

Supervisors approved a resolution killing the agreements on a 4-0 vote after more than 10 hours of deliberation over two days.

Voting were Dick Akin, Casey Kroon and Joan Bechtell, all new board members, and incumbent Peter Licari. Supervisor Joe Benatar, another incumbent, abstained because he is in real estate, but he attacked his colleagues for taking such hurried action.

The supervisors said they had to act quickly because the contracts would give developers legally vested building rights before a June 8 referendum.

The first four of the 18 separate agreements had been scheduled to take effect at midnight tonight.

But the supervisors were clearly troubled by their dramatic decision – and the threatened lawsuits – to overturn contracts that were designed to be inviolate no matter who sat on the board.

Supervisors were particularly grim-faced in explaining their actions to a crowd of more than 400. They acknowledged they were acting in a less than statesmanlike manner, something they had criticized their predecessors for when the previous board quickly passed the agreements last month, just before leaving office.

"I'm doing exactly what the past board did for the past two years on this," Licari said.

Akin said the tactics were necessary because the public vote in June on the issue would have been meaningless if the agreements were allowed to stand. "These actions may seem extreme. But if we are ever to have a clear vote and a healing process, it must start here."

The new board first voted to suspend several of its own rules: one requiring adequate public notice of the meeting and another demanding that all agenda items be prepared by board staff.

In one of the most bitterly argued issues, it was disclosed that the new supervisors' two-inch-thick pile of resolutions had been prepared by the same Sacramento law firm that counseled them before they took office.

Lawyer Brenton Blier, whose firm performed the work, said the firm waived its $10,000 fee, donating its services as a gift.

Gregory Thatch, lawyer for Sutter Bay Associates, said that if Blier's firm tried to get future work from Sutter County it would constitute a criminal conflict of interest. He warned board members that they could face criminal and civil penalties.

In another tense moment, Licari told developers, their lawyers and County Counsel Darrell Larsen to "go into a back room" and try to work out a compromise. The public, including the press, was barred from the 20-minute meeting. Supervisors said it didn't violate state open meetings law because elected officials weren't present.

Dozens of citizens testified in the public meetings that began Tuesday night, adjourned after midnight and resumed at 11 a.m. Wednesday. Critics of the development described Falik and his partners as speculators who would sell out without building anything, while supporters said it would attract jobs and industry to the impoverished county.

The controversy is far from over. Developers are backing a June 8 vote on whether the entire 25,000-acre growth area should be incorporated into a new city, called Pleasant Grove. If that happens, decisions on the development would be made by the newly incorporated town's council – not the county supervisors.

(From the Sacramento Bee, Aug. 3, 1993)

NEW NORTH NATOMAS PLAN EMERGING

By Dan Bernstein
Bee Staff Writer

The vast farm fields of North Natomas would turn into a vibrant mix of pedestrian-oriented neighborhoods, attractive business parks and urban-style hubs around light-rail stations under a new land-use plan hammered out by a broad coalition of interest groups in an extraordinary process.

If approved later this year by the Sacramento City Council, the plan would replace a 6-year-old blueprint that has spurred little development in the 9-square-mile area beyond Arco Arena.

"They have, in my opinion, developed a better plan for North Natomas in terms of land use, a user-friendly community, public transit and recreation," said Deputy City Manager Robert Thomas. "This is a much better plan than the 1986 plan."

The existing plan grew out of a bruising political battle in the early 1980s tied to bringing the Sacramento Kings from Kansas City. It then became mired in numerous lawsuits and – later – concerns about flooding.

The new plan, which has emerged after 10 months of intense meetings involving developers, environmentalists, city officials and neighborhood activists, features several progressive concepts. They include clusters of retail stores and multiple-story apartments around light-rail stations; nearly a dozen distinct neighborhoods with their own schools, parks and community centers; and sports fields designed to act as reservoirs during heavy rains.

At the same time, it would allow more types of commercial development along freeways and major roads than the original plan, which reserved those corridors for high-tech manufacturing plants like those in Silicon Valley. Sacramento failed to attract such plants.

The plan also attempts to stimulate residential development by designating far more land than the original plan for single-family homes on large lots, which one developer said probably would cost from $160,000 to $400,000.

A key assumption behind the plan is that the council will eliminate a requirement that a baseball-football stadium be half completed before residential development can begin – a move it has refused in the past. The stadium, adjacent to Arco Arena, is only 20 percent complete because its developers ran out of money.

City officials stressed that the plan is in draft form and could change based on an upcoming traffic study. But they said the plan's main elements will remain intact, and participants consider it to be all but wrapped up.

"I'm very optimistic about what we've come up with," said Michael Brumbaugh, vice president of development for Centennial Group Inc., which owns about 1,400 acres in the 9,320-acre area. "It's probably a blessing in disguise that this (planning process) has drawn itself out as long as it has."

"While we're not getting everything we want, we're miles from where we were," said Tom Whitney of the Environmental Council of Sacramento. "On many levels, this is a far better plan from an air-quality perspective than the original plan."

But developers say two major hurdles remain before building can begin in the region bounded roughly by Interstate 80 on the south, Elkhorn Boulevard on the north, and the Natomas main drainage canals on the east and west.

First, Congress must take some action to improve flood protection in the Sacramento area. That could be done either by authorizing the proposed Auburn dam or requiring local agencies to take other steps, such as strengthening levees and lowering lake levels, until the fate of the dam is decided.

Second, developers are counting on city officials to revise a financing plan for North Natomas to lower the cost of public improvements such as a drainage system, freeway interchanges and a 200-acre park.

The city has estimated the cost of those improvements at $388.7 million, or $92,800 per acre. A recent city report showed that public improvements for other major development projects in the Sacramento area range from $20,430 per acre to $66,400 per acre.

The current estimate for North Natomas does not reflect costs associated with new schools, light rail and habitat for two endangered species – the Swainson's hawk and the giant garter snake. Those improvements could drive the price to $599.7 million, or $143,225 per acre, according to city officials.

City officials say they hope to lower the developers' costs through a variety of measures, including redesigning the drainage system to eliminate wide canals and allowing developers to postpone some improvements.

"We do know we have to be more reasonable in terms of the cost," said Thomas, who led the group that assembled the new plan. "We have an opportunity to develop a model for new communities."

Brumbaugh of Centennial – along with Michael Winn of Winncrest Homes and Robert Riolo of Sacramento Savings and Loan Association – said that the city should help pay for some public improvements that will benefit residents citywide, such as a regional park and freeway interchanges. But Thomas said the city is not inclined at present to subsidize those projects.

If the new plan is adopted and all hurdles can be overcome, Riolo said, construction of office buildings along I-5 could begin within a year. Winn said his company could start building homes in early 1994, while Brumbaugh said his company might begin home construction in late 1993.

Although the new land-use plan was heralded by those developers – as well as environmentalists and neighborhood activists who worked on the plan – one group member said he was greatly disappointed with the outcome.

David Mogavero, an architect and former president of the Environmental Council of Sacramento, said he dropped out of the so-called "working group" a month ago because he thought developers were calling the shots.

Mogavero said he thought the plan should contain far more open space for wildlife habitat and recreational uses, and much less land for single-family homes that, he said, will discourage use of mass transit.

"If we're serious about environmental planning we have to be more aggressive than we are in North Natomas," he said. "It's a lost opportunity."

Still, he shared the view of other members of the group that the new proposal is a vast improvement over the current plan.

Gregory Thatch, an attorney for the North Natomas Landowners

Association, whose members own about 75 percent of the land there, said the original plan was flawed by the forces that shaped it.

"The original plan for Natomas was not driven by the need or desire to have good land-use planning," he said. "It was driven more on the basis of bringing the Sacramento Kings here. There was such an incredible emphasis on that that planning issues were lost in the shuffle."

Thatch said his group has spent more than $1 million on efforts to revise the plan. He said landowners collectively are losing at least $45,000 a day on interest costs for their idle land.

(From the Sacramento Business Journal, Dec. 12, 1992)

ENVIRONMENTAL GROUP FIGHTS FED FUNDS FOR LEVEE REPAIR

By MIKE McCARTHY

A local environmental group is fighting the use of $16 million in federal funds for flood control in North Natomas unless officials agree to halt future development of the Natomas basin.

Friends of the River maintains that federal money cannot be used for flood-control projects that enable development in deep flood plains. If the group succeeds in stifling federal funding, Natomas' developers may find themselves stuck with the $16 million bill.

And that has developers fuming. "Why should we not be able to tap into federal funds when hundreds of communities throughout the nation are able to do so. I don't see the logic," said Mike Brumbaugh, vice president of development for Centennial Community Developers Inc., one of North Natomas' largest landowners.

The crux of the controversy is the thorny question whether any more development should be allowed in an area that might — despite flood-control efforts — be buried under 20 feet of water if heavy floods crack a weak spot in the 37 miles of levees that surround the basin.

Bolstering the Natomas levees will cost about $32 million, according to the Sacramento Area Flood Control Agency. The feds are supposed to pony up half that amount; the other half is to be funded locally. The project is part of a larger, $52 million effort that calls for levee repair elsewhere in Sacramento as well as "re-operation" of Folsom dam to store more floodwater.

Considerable development is planned for the 74-square-mile Natomas basin, which stretches from Sutter County to Sacramento. Sutter County, for instance, has approved urban land uses for 25,000 acres, most of which are in the basin. The land eventually could hold a population of 142,000 in 55,000 homes. And the city of Sacramento is contemplating a community plan for 30,267 homes and a population of about 58,000 in its portion of North Natomas.

Part of the environmental group's reason for opposing development in Natomas is that additional development in the 55-acre basin would increase pressure to build more dams upstream to ensure that flooding doesn't occur, said Charley Casey, associate conservation director with Friends of the River.

His group is supported in this campaign by two national organizations — the Environmental Defense Fund in Oakland and the National Wildlife Federation in Washington, D.C., he said.

The primary weapon being used by Friends of the River to halt development is a bill passed by Congress in October that funds a study of a future dam at Auburn and authorizes the U.S. Army Corps of Engineers to, among other things, build Natomas' levees once a cost-sharing program is set up with locals. The Sacramento Area Flood Control Agency would front the money for the project and then be reimbursed by the Corps for the federal share.

The bill stipulates that the Corps can do the job only "provided that such construction does not encourage development of deep flood plains."

The measure was partly a last-ditch attempt by proponents to keep the Auburn

Dam project alive after Congress passed it over earlier that month. But it also shows that Congress views Natomas as too risky to develop, Casey said.

Friends of the River, he added, is not opposed to flood protection for Natomas' existing residents. "We're trying to express Congress' concern with putting more people in the area," he said. "There's a moral question whether more people should be allowed to live in a very dangerous area. A flood in that area could get very deep, very quickly."

About 40,000 people currently live in Natomas, mostly in South Natomas. Another 25,000 or so live in adjacent neighborhoods in North Sacramento that also are in the basin.

Nonresidential development, Casey added, may be acceptable because it does not put people as much at risk.

Although Friends of the River has not yet filed a suit on the issue, that is a possibility, said Ron Stork, who's also an associate conservation director with the group.

Meanwhile, local officials and developers are dubious about the group's campaign.

It can be argued that once you build flood protection for the area, it is no longer legally a "deep flood plain" and its residents are protected, said Tim Washburn, an attorney with the local flood control agency. That's how Congress seems to be approaching the issue in other regions, he added.

If environmentalists stymie federal funding for the levees, it's unclear who will pay the $16 million, Washburn said. The other $16 million is slated to be raised by assessments to the affected areas.

Although Washburn wouldn't say if developers would be asked to foot the bill, that has been municipal policy in similar cases.

Without the federal money, the flood-protection program is cast into doubt, according to developer Brumbaugh. And that puts the area's current residents at greater risk. "They would jeopardize the 44,000 residents who already live there — jeopardize their opportunity for federal funds. To me that's just absurd," he said.

"There are areas of Natomas that are higher than the city of Sacramento," added one development consultant, who asked not to be named. "Large portions of Natomas would have only have shallow flooding of two or three feet."

The basin's deepest area — South Natomas — already is developed, he added.

A crucial question is whether developers can handle the extra cost. Already the price of North Natomas' infrastructure is estimated at some $557 million. And that figure could well end up larger. Among other things, it doesn't include habitat protection, said Leroy Saage, the Nolte and Associates consultant who's drafting the area's financing plan.

North Natomas already is the most expensive infrastructure project ever seen in the region.

"Anything that would add costs to the project is not good for its feasibility. A loss of federal funds, we'd consider a real unfortunate development. I consider it a sufficient challenge to pay for things that are already on the table," he said.

LETTER FROM RONALD M. STORK, ASSOCIATE CONSERVATION DIRECTOR, FRIENDS OF THE RIVER

February 1, 1993

Ronald M. Stork
Associate Conservation Director
Friends of the River
Sacramento Office

Trish Davey
Contract Project Manager
Environmental Services Planning Division
City of Sacramento
Planning and Development Department
1231 I Street, Room 301
Sacramento, CA 95814

Re: Notice of Preparation, North Natomas Community Plan Update EIR

Dear Ms. Davey,

Friends of the River has reviewed the Notice of Preparation of Focused Environmental Impact Report for the North Natomas Community Plan Update. We believe that a number of additional issue areas need to be addressed in the North Natomas Plan Update. They represent "significant areas not addressed in the 1986 North Natomas Plan" or they represent areas where "cumulative environmental conditions have changed."

Water Resources, Drainage, and Hydrology/Flooding is the first critical area that needs careful assessment in the light of new information and recent events that have changed the underlying basis of previous reviews. Corollary to the examination of the flood risk issues is Public Health and Safety. As these issues are analyzed and the serious consequences of levee break flooding understood, Land Use policies that retain existing agricultural and open space uses (and depart from existing and reasonably foreseeable general plans) become much more feasible and should be examined.

Flood Plain Management Policy

There are two basic flood risk policy issue areas that should be examined in the light of new circumstances and new information developed in the past two years. The first is land use planning within the 100-year floodplain. The second is land use planning outside of 100-year floodplains but within floodplains documented by the U.S. Army Corps of Engineers in the American River Watershed Investigation Feasibility (ARWI) Report EIS/EIR published in December of 1991.

In the event of levee breaks that allow inflows of either the American or Sacramento River flood flows into the Natomas Basin, North Natomas lies entirely within both flood plains (indeed the geographical areas of both flood plains are virtually identical).[1] Both flood plains are subject to virtually the same flood depths, often in excess of 15 feet.[2] These are catastrophic flood depths — capable of causing 100% damage to single story buildings (and many two story buildings) within the Natomas Basin.[3] (See Figure 1). Evacuation of the basin will have to be accomplished quickly to avoid widespread

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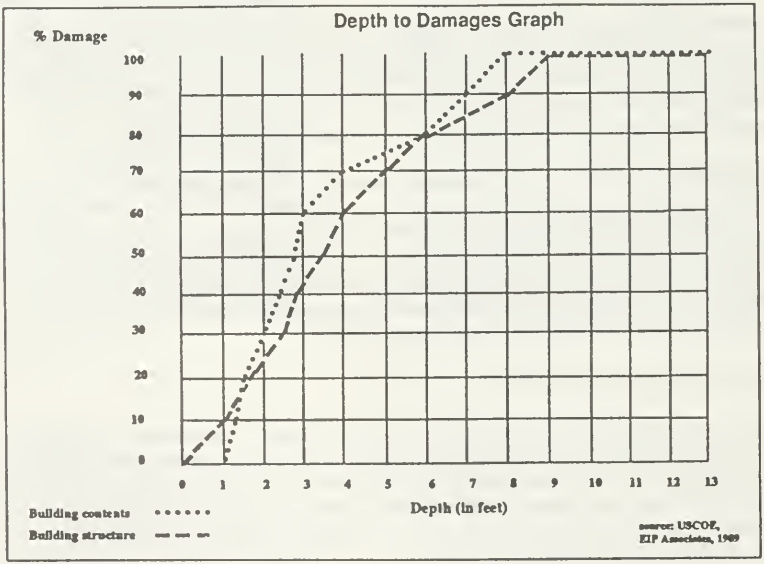
Footnotes at end of letter.

fatalities.[4] Projected fatality estimates by the City of Sacramento and Army Corps of Engineers range from one out of every 220 to 10,000 residents living in the Natomas flood basin.[5] Draining a flooded Natomas Basin could take as much as one month.

Notice of Preparation Initial Findings

According to the Initial Study Findings prepared by the City's Environmental Services Division, the "program" EIR addressing the flood-related risks to people and property created by new development in the 100-year floodplain in the City" is the *Land Use Planning Policy Within the 100-year Flood Plain in the City and County of Sacramento.* The EIR was certified by the City Council and a Findings of Fact and a Statement of Overriding Considerations were adopted by the City Council in February of 1990. As a result, the Environmental Services Division Initial Study Findings suggest that no further environmental analysis on flood risk is required.

On the basis of this EIR, the Council action requires floodproofing of commercial and residential building structures located in the Natomas Basin. According to these documents, the Council action imposes a *de facto* building moratorium on residential development and dramatic elevation (floodproofing) requirements on commercial buildings in the Natomas Basin.[6] In effect, the execution of the North Natomas Community Plan rests on the implementation of the Land Use Planning Policy that currently prevents many of the developments contemplated by Community Plan.



source: USCOE, EIP Associates, 1989

Figure 1

The principal purpose of the EIR and subsequent Council decisions was to establish some kind of flood safety regulatory framework during the four year period when the McKinley Homeless Act (P.L. 100–628) stayed the imposition of the new flood plain management restrictions. These restrictions would have ordinarily been imposed by the Federal Emergency Management Agency (FEMA) after the U.S. Army Corps of Engineers reevaluation of the effectiveness of Sacramento's flood control system after the storm of record in 1986.[7] They are now in the beginning stages of being implemented.

It is not altogether clear what the policy of the Council will be concerning North Natomas development requirements until the time when the FEMA can remap the Natomas Basin outside of the 100-year floodplain. The Statement of Findings asserts (in a significant error of omission) that "protection from a 100-year flood would not be achieved in Natomas until 1992 when the levee is stabilized." (pg.5.) The Mitigation Monitoring plan adopted with the Statement of Overriding Considerations states that development restrictions will be imposed in the Natomas Basin until *the levees can be stabilized.* (pp.2-6).

Levee stabilization of the Sacramento River levees provides the Natomas Basin approximately a 50-year level of flood protection.[8] The levee stabilization project (Sacramento River Flood Control Project — "Sac Urban") is practically complete.

According to the current Corps of Engineers analysis, the Natomas Basin cannot be remapped out of the 100-year flood plain until the seasonal flood control space at Folsom Reservoir is increased 190,000 acre feet and internal levee improvements inside the basin are completed.[9] The 1990 Land Use EIR anticipated that both of these actions would be ratified by Congress in 1992. Since the Congressional rejection of the Corps of Engineers Flood Control proposal last year, it is uncertain when either or both of these actions will be undertaken — if ever.

We believe that the Council intended to continue to require flood proofing in the Natomas Basin until the Basin could be remapping outside of the 100-year floodplain. *The Draft Sacramento Land Use Planing EIR* "Impacts and Mitigations Summary", and the adopted mitigation measures in Section 2.2 in the "Statement of Findings" propose development restrictions in Natomas in areas subject to 100-year flooding without any sunset clauses tied to levee stabilization. It is probable that the Council mistakenly believed that levee stabilization was all that would be required to remap the Natomas Basin out of the 100-year flood plain at the time of the adoption of policy — in spite of the evidence in its own EIR. If that is the case, it needs to modify its Mitigation Monitoring Plan to reflect that intent.[10]

To the extent that the City believes that the City floodplain management restrictions (and corresponding analysis) expire when the levee stabilization project is completed, it is unclear how the certified EIR and Council policy action apply to the Environmental review of the North Natomas development supplemental EIR since the levees will be stabilized before the North Natomas EIR can be certified.

Additionally, please note that the Council Findings and floodplain management decisions are largely based on a risk analysis for two year (1990–92) period until levee stabilization and the 5 year (1990–1995) period judged necessary to complete the Natomas Basin internal drainage levees. These short periods, coupled with the substantial building restrictions being contemplated before remapping occurred, were judged to not create an unreasonable risk of flooding (§1.2.1–§1.2.3) but still be a significant public safety environmental impact (§2.1 & §3.2). It is unclear if the analysis would reach the same conclusions if the time required to reach 100-year flood protection levels extended toward the year 2000.

Federal Land Use Policy in 100-year Flood Plains

While local land use policy within 100-year floodplains is an important responsibility of local decision makers, local land use policy and environmental analysis must fit well with federal policies to be useful as the *program EIR* for these areas. Even in the absence of a comprehensive land use planning policy from local governments, the Federal Emergency Management Agency (FEMA) has practical and effective means of restricting financing of new structures in the Natomas Basin that are subject to flooding.[11]

There are only two practical ways for Sacramento to permit new construction (except on stilts) within the 100-year Natomas Basin floodplain. The first is to comply with the Brooks amendment which establishes the criteria for adequate progress in the restoration of the incomplete 100-year flood control system.[12] One criteria requires that the project be 100% authorized. Federal authorization and funding for the Natomas internal levees is contingent on local adoption of land use plans that would prohibit new developments in the Natomas basin.[13]

The second way to avoid federal construction restrictions in the 100-year Natomas Basin floodplain is be remapped as an AR zone. This new special flood hazard zone that was added to FEMA's National Flood Insurance Program by the Housing and Community Act of 1992 (HR 5334). The AR zone establishes the ability of FEMA to waive requirements for the construction of unfloodproofed buildings in areas with base flood elevations under 5 feet in depth (and in certain other cases). But most, if not all, of North Natomas is subject to flood depths considerably greater than 5 feet.[14] Moreover, the legislative history accompanying the legislation makes clear that "the flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."[15] This would certainly apply to North Natomas.[16]

Because of recent events and federal statutory action, it is possible that the Natomas Basin may not be remapped out of the 100-year floodplain for years, perhaps decades. This potential delay may have considerable bearing on the assumptions of the North Natomas EIR. One important impact of an out-of-date water resources, drainage, and hydrology analysis may be the failure to recognize the differential effect that long–term implementation of special hazard area restrictions may have on commercial and residential construction in North Natomas. Since commercial buildings are often more feasible to floodproof, the development of a residential/commercial mixture contemplated by the development plan could be rendered infeasible. As a consequence, the North Natomas development's planning assumptions may need to be reevaluated.

Land Use Policies for the 125–400 Year Flood Plain

Because of federal financing restrictions and liability concerns, practical development of North Natomas will become possible only when flooding from levee breaks on the Sacramento and American Rivers is judged to have a frequency of less that 1%/year — safe from the so called 100-year flood.

The policy and flood safety implications of permitting new developments in deep flood plain areas of Sacramento and the Natomas Basin remain essentially unexamined. "Flood control" seems to be defined as any facilities that reduce annual flood risks to less than 1%. As implied in the Land Use Policy, once this level is achieved, Sacramento and Sutter County decision makers appear unwilling to resist opening up the floodplain to development — even when many areas remain subject to deep, catastrophic flooding, and remain within the floodplains mapped by the Corps of Engineers in the American River Watershed Investigation.[17]

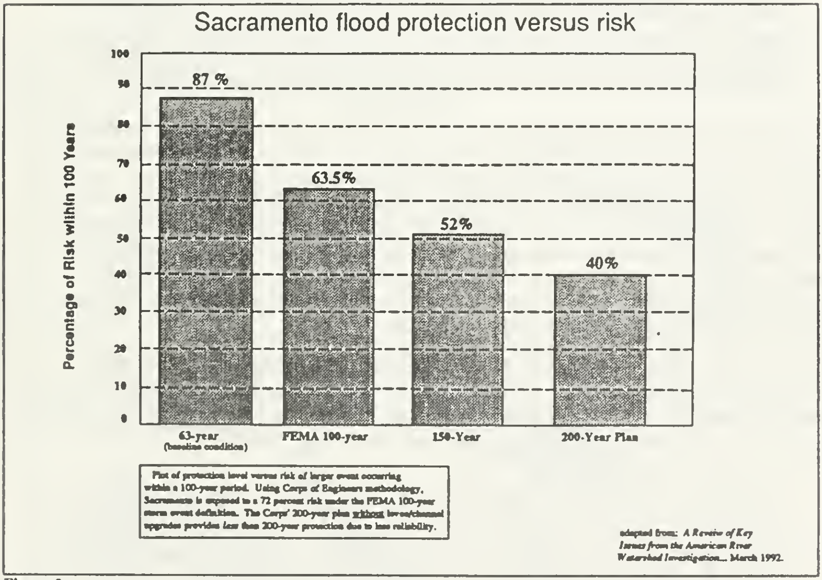
The flood control projects contemplated for the Natomas Basin do nothing to raise the level of basin, which would reduce the *severity* of anticipated floods. The projects simply reduce the frequency of catastrophic floods. Yet the frequency of flood events that exceed the capacity of Sacramento's anticipated flood control improvements remains high — 63.5% per 100 years for the SAFCA 100-year "local project"[18] and 40% per 100 years for the preferred plan in the Corps of Engineers American River Watershed Investigation EIS rejected by Congress in September of 1992.[19] The sobering Figure 2, "Flood Protection vs. Risk," from *A Review of the Key Issues from the American River Watershed Investigation Feasibility Study and An Analysis of Alternatives for Increasing Flood Control in Sacramento*, Watson, Swanson (SAFCA), March 1992, needs to be reviewed and understood by planning staff and Sacramento decision makers.

It is unclear how the City's *Land Use Planning Policy within the 100-year Flood Plain In the City and County of Sacramento* can serve as the *program* EIR for flooding and safety impacts *outside* of the 100-year floodplain.

The Draft Land Use EIR relies on the FEMA 100-year threshold to determine the threshold of the significance of flooding. But the threshold conclusion is expressly limited to the scope of the Land Use Planning EIR — a document that establishes land use planning policies *within* the 100-year floodplain.

> "By adopting the 100-year flood as the base flood for purposes of its implementation of the National Flood Insurance Program (NFIP), FEMA has indicated that less than 1 percent chance of flooding is an acceptable risk, whereas exposure to greater than a 1 percent chance of flooding is an unacceptable risk. It is, therefore, appropriate that this EIR use exposure to the 100-year flood as a threshold of significance for the evaluation of environmental effects. For the *purposes of this analysis only*, exposure to flooding greater than 1 percent per year is considered a significant impact." (p. 65, Land Use Planning EIR)

Reliance on the FEMA standard to determine whether it is prudent to construct buildings subject to deep flooding is questionable. FEMA's standards are minimum ones; local communities are free to impose whatever additional requirements are warranted by the special circumstances that apply to areas within their zoning and floodplain management responsibilities.



Plot of protection level versus risk of larger event occurring within a 100-year period. Using Corps of Engineers methodology, Sacramento is exposed to a 72 percent risk under the FEMA 100-year storm event definition. The Corps' 200-year plan without levee/channel upgrades provides *less* than 200-year protection due to less reliability.

adapted from: *A Review of Key Issues from the American River Watershed Investigation*... March 1992.

Figure 2

This situation was noted by Sacramento Supervisor Grantland Johnson in his testimony supporting the authorization of the Corps of Engineers ARWI Project before the House Interior Committee on July 23, 1992:

> "...FEMA's 100-year requirement is not a public safety standard. It is an insurance standard only, created as a compromise between the Federal government and local development interests in order to facilitate widespread participation in the NFIP [National Flood Insurance Program].
>
> As FEMA itself acknowledges, the 100-year standard is not meant as a particular substitute for public safety determinations in particular circumstances. This is because the 100-year standard is essentially a frequency threshold that takes no local variables into account, such as the depth and severity of flood damages in one flood plain versus another..."

Unquestioning reliance on the federal FEMA standard to determine the desirability of approving developments in the deep Natomas Basin floodplain is particularly ironic in view of the recent actions by the United States Congress. As one of the leaders in the floor debate that led to the 273 to 140 vote to reject the Corps of Engineers proposal on the floor of the House of Representatives this fall, Representative Jim Jontz asked the natural questions that would arise from the issue of relying on a FEMA standard which doesn't account for depth and severity of anticipated flooding.

> "To be justifying a project to protect things which are not now there does not make any sense. Why should the Federal Government assist in funding a project to lead to increased development in a flood-prone area? Have the city and county of Sacramento adopted land-use restrictions to limit flood damages in this area? Or are we going to send more dollars to protect something that should not happen in the first place?"

As a result of these concerns, federal authorization of the Natomas internal drainage levee improvements was made conditional on flood control design or land use policy decisions that would prevent development in deep floodplain areas of the Natomas Basin. In effect, a City Council decision to approve development in North Natomas (whose 100 to 400 year floodplains have been mapped and are assuredly quite deep — and whose near-term development is effectively contingent on reoperation or more efficient operation of Folsom dam *and* the improvements to the Natomas internal drainage levees) eliminates the opportunity for Federal financing for a project designed to achieve 100-year protection for developed areas in South Natomas and the rest of the Basin.[20]

In the absence of City and County decisions to end new developments in the Basin, SAFCA will be forced to fund this project out of *local* funds. This represents a loss of 16 million dollars to SAFCA's proposed "local project." This new situation changes at least one of the underlying assumptions of The Draft Land Use Policy EIR:

> "The Sacramento Metropolitan Flood Protection Task Force, in proposing the policy, believes that additional development which would occur in the floodplain is necessary in order to generate funds for required local contributions to costly flood protection efforts. One long-term implication of substantial restrictions on development in the flood plain could be that lack of funding eliminates or defers the provision of 100-year flood protection to existing development in the City and County. (pg. 126)"

Apart from the financial implications, the Congressional authorization language limit should be a signal to local decision makers that approval of more developments subject to catastrophic flooding in the Natomas Basin based on compliance with *minimum federal flood insurance* standards may not be consistent with federal policy as embodied in Executive Order 11988, or the organic act for the NFIP which directs FEMA to:

> "...encourage state and local governments to make appropriate land-use adjustments to constrict the development of land which is exposed to flood damage and minimize the damage caused by flood losses, [and] to guide the development of proposed construction, where practicable, away from locations threatened by flood hazards." (P.L. 90-448, Title XII).

Moreover, the Congressional authorization language means that development approval for the North Natomas Development may "disrupt the ongoing effort to obtain comprehensive flood protection for the Sacramento area."[21] This is a new situation that has yet to be addressed in any City planning documents or policy formulations.

Finally, we note that the Statement of Findings raised the concern that by:

> "...imposing a *de facto* moratorium on all new development in large areas of the 100-year floodplain where the projected levels of a 100-year flood would make compliance with City/County elevation requirements impractical [this would] result in a pattern of dispersed development throughout the Sacramento region. This would be contrary to existing City goals and policies and would result in significant environmental impacts unrelated to flooding. It is estimated that roughly two-thirds of the employment generating uses and one-half the residential uses affected by a moratorium on development in the 100-year floodplain would locate in other parts of the Sacramento region. This dispersion of development would be inconsistent with long-standing City policies aimed at: minimizing traffic congestion and air pollution; assuring the availability of affordable housing for new workers; facilitating a diversification of the commercial and industrial structure of the local economy; and ensuring that the City provides for its fair share of the regional housing need." (pg. 20.)

Given the substantial long-term fallibility of all of the current flood control projects being proposed for the Natomas Basin, we have to ask; does the following drawing (figure 3) represent the best way to meet the forgoing needs?

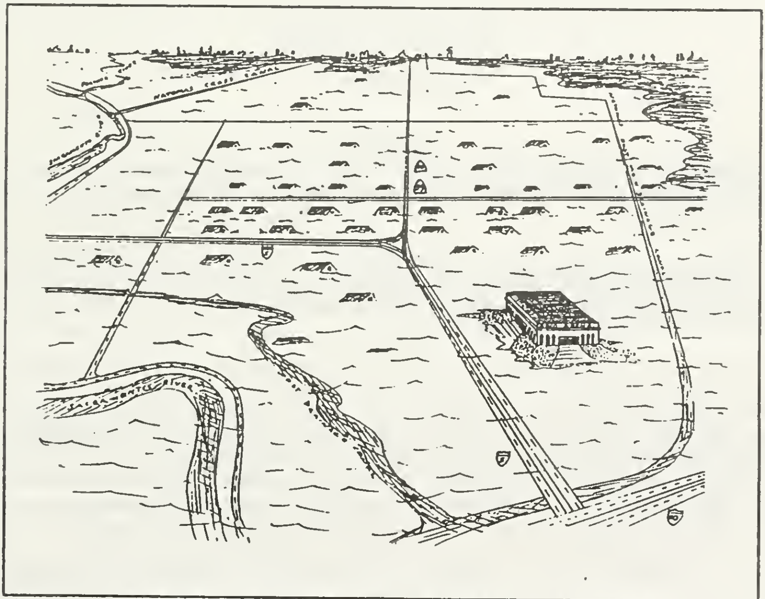


Figure 3 The Natomas Basin — Air Pollution Solution? Affordable Housing? Economic Diversification? Sacramento's Fair Share of the Regional Housing Need?

Finally, we have not examined all of the many North Natomas Comprehensive Drainage Plan Studies. However, we observe that the magnitude of the "target" storm mentioned in the NOP Initial Findings Summary may be an appropriate program level EIR subject if local flooding *in excess* of "target" levels is still capable of causing flood depths that threaten lives and property. In other words, make sure the "target" storm the engineers are trying to defend against is big enough to be representative of the hazards to planned City urbanization.

Other Study Areas

Cumulative Impacts — Any examination of Water Resources/Public Safety issues for the North Natomas Community Plan needs to address the wider implications of City policies that promote the development of deep floodplains. Developments in Sacramento County are contemplated by the Sacramento County Board of Supervisors, contingent on City North Natomas development and urban limit line general plan decisions. Sutter County Supervisors and potential new city city councils are also contemplating development decisions in the Natomas Basin. The adoption of a Sacramento City Council Land Use policy that declares developments in deep floodplains to be safe and in the public interest will have a significant cumulative impact on the region's vulnerability to flood damages and loss of life, since the decision to move more people and structures into a deep floodplain is often based on policy precedents and the perception that because development has already occurred in hazardous areas, more development is warranted or unavoidable.[22] Thus, the decision to develop the rest of the 55,000 acre Natomas Basin (now 90% undeveloped) may very well rest with Sacramento's decision to develop North Natomas.

Sincerely yours,

Ronald M Stork

Ronald M. Stork

FOOTNOTES

[1] *American River Watershed Investigation, California, Feasibility Report*, December 1991, U.S. Army Corps of Engineers, The California Reclamation Board, plate 7. See Attachment 1.

[2] *Id*, pp. III-15–III-23.

[3] "Relationship of Depth to Damage," "Damage–Depth Curve", Appendix F, *Draft Environmental Impact Report, Land Use Planning Policy Within the 100–Year Flood Plain in the City and County of Sacramento*, City of Sacramento, September 1989.

[4] From the July 23, 1992 testimony of then Sacramento Mayor Anne Rudin before the House Interior Committee on HR 5414: "I was mayor in February of 1986 when the flood waters of the American and Sacramento River rose to their highest stage in the modern era of the city. During that storm we faced what is probably the most difficult decision a local official can make in Sacramento: whether to evacuate thousands of residents in anticipation of any uncontrolled flood.

The logistics of such an action are almost incomprehensible. Nighttime operations are out of the question. Even during the day, traffic studies show that many hours would be needed to clear critically flood prone areas. And yet a levee break, depending on the size of the storm and the location of the break, could produce enough runoff to disable most automobiles in two to twelve hours. Thus to be fully effective, an evacuation order must anticipate a levee failure before it actually occurs.

Local officials are put in an impossible position. Undue caution brings the wrath of citizens who would feel unnecessarily displaced. Undo optimism could result in unnecessary loss of life...."

[5] *ARWI Report/EIS/EIR, Supra*, III-18, *Draft Land Use Planning Policy, Supra*, pp. 106–116.

[6] *Resolution No. 90-102, A Resolution Adopting Findings Regarding the Environmental Impacts and Overriding Considerations Involved in Approving the Land Use Planning Policy with the 100–Year Floodplain of the City of Sacramento (P88-358)*, February 6, 1990, p.2.

[7] *Id.* Introduction.

[8] *Draft Land Use Planning EIR, Supra*, p.11.

[9] *Draft Folsom Dam & Reservoir Reoperation, California, Operation Plan and Environmental Statement*, Army Corps of Engineers, March 1992, pp. S-2,3. *Draft Environmental Impact Report for the Natomas Area, Flood Control Improvement Project*, Sacramento Flood Control Agency, July 1992, pg. 4.0-9.

The Sacramento Flood Control Agency (SAFCA) has requested the U.S. Army Corps of Engineers to exercise its authority and responsibility to reoperate Folsom Dam so that it provides Sacramento with the Flood Control abilities that had been contemplated during its authorization 40 years ago. Legislative direction to achieve this goal had been included in the defeated ARWI project legislation (HR 5414) last year. The Corps of Engineers has not replied to SAFCA's request that relies on SAFCA's belief that reoperation changes lie within the administrative authority of the Corps of Engineers.

The Corps of Engineers reoperation estimate relies on assumptions that assume substantial operational inefficiencies in flood control operations of Folsom Dam. Improvements in these operations are the subject of a joint Bureau/Corps study to be completed in 1993. Thus the Corps analysis may change somewhat if the operational reliability of Folsom Dam can be enhanced as a result of the conclusions of this study.

[10] The Sacramento Area Flood Control Agency apparently believes that some Council action is necessary. On January 21, 1993, SAFCA adopted Resolution No. 93–002, *The Revised Strategy on Steps Needed to Achieve Flood Protection for Sacramento.* In part it states: "In its capacity as local sponsor of the Sacramento Urban Area Levee Reconstruction Project, SAFCA will seek to expedite the repair of structural deficiencies in portions of the east levee of the Sacramento River between Freeport and Verona. Upon completion of this work, staff directed to: 1) Provide the City Council of Sacramento with appropriate notice of project completion so that the Council may determine whether or not to amend its floodplain management ordinance as contemplated in that ordinance;..."

[11] *Draft Land Use Planning EIR, Supra*, pp. 73–78.

[12] 44 CFR, Ch.1 §61.12 (10-1-87 Edition)

[13] "The Secretary of the Army is authorized and directed to construct the Natomas levee features of the project as described in the feasibility report described in subsection (a), [ARWI, July 1, 1992] *provided that such construction does not encourage the development of deep floodplains.*" 1992 Defense Appropriations Bill, Natomas Levee Features.

[14] The McKinley Homeless Act of 1988 prohibited FEMA from remapping the Natomas Basin floodplain with base flood elevation notations on the map. The Act expired in November of last year. FEMA is expected to issue draft maps that reveal actual flood depths from Sacramento or American River levee break events affecting the Natomas Basin in January or February of 1993.

[15] *Congressional Record*, Senate 17910, October 8, 1992.

[16] The Sacramento Area Flood Control Agency has requested FEMA to implement some fairly broad definitions of "infill areas" that would be largely exempt from AR zone building restrictions. At least one definition may apply to all of the Natomas Basin, now 90% undeveloped. If adopted, this proposed interpretation would permit construction to move forward with a federal elevation limitation of 3 feet (although local jurisdictions can impose more restrictive elevation requirements). These expansive "infill" definitions are inconsistent with the law and the direction of Congress.

[17] This has been a continual concern of the State of California. "If either of those alternatives [100–year FEMA or 150–year] were chosen, more new development would occur in the area, due to the lifting of the FEMA build building limitations. Such development would effectively increase both human and economic risk by allowing additional exposure to less than adequate flood protection in the area." Statement of Douglas P. Wheeler, Secretary for Resources and David N. Kennedy, Director, Department of Water Resources, State of California on HR 5414, to authorize the Secretary of the Army to carry out a project for flood control and recreation on the Sacramento and American Rivers, before the House Committee on the Interior, July 23, 1992.

[18] Permission to proceed on The "Local Project" was approved by the SAFCA Board of Directors on January 21, 1993. It involves the levee improvements on the Natomas Cross Canal, East Main Drain, and extended and raised levees along Dry and Arcade Creek. A draft EIR entitled the *Natomas Area Flood Control Improvement Project*, was prepared for SAFCA in July of 1992. SAFCA currently intends to publish a supplemental draft EIR for the project.

[19] The Corps of Engineers used a different analytical model to determine storm frequencies and magnitudes than the method use by FEMA. Thus the ARWI assumptions treat the 100-year FEMA storm as a 85-year storm. An 85-year event flood control system would have a 72% chance per 100 years of a storm event that would exceed the design capacity of the system.

[20] At least one SAFCA legislative consultant has attempted to interpret the provisions of the Defense Appropriations bill to permit the receipt of federal funds for the drainage levee construction while allowing local governments to permit new developments in the Natomas Basin. It is suggested that the Basin is either not "deep" nor a floodplain. With average major flood depths in North Natomas of 15 feet and USCOE depth damage curves assuming 100% damage to single story building contents and structure at little more than one half that level (and an AR zone development restriction threshold of 5 feet) this seems to be an unpersuasive suggestion. The assertion that the Natomas basin would not be in a floodplain after the construction of the "local project" and remapping out of the 100—year floodplain is similarly unpersuasive. The floodplain maps of the Natomas Basin available to the United States Congress at the time of the legislation were the 400—year floodplain maps developed and published by the U.S. Army Corp of Engineers in the American River Watershed Investigation. Additionally, the definition of floodplain in the principal Executive Order to federal agencies on floodplain management (Executive Order 11988, May 24, 1977) would permit the inclusion of the Natomas Basin — both before and after the completion of the SAFCA "local project." "The term 'floodplain' shall mean the lowland and relatively flat areas adjoining inland and coastal waters...including *at a minimum*, that area subject to a one percent or greater chance of flooding in any given year."

[21] These are the words that the City Council used when it decided not to impose FEMA style development restrictions on new developments within the newly defined flood plains outside of Natomas in the 1990 Statement of Findings.

[22] In an article by Sarah Pollock, in the Winter 93 *Pacific Discovery* magazine published by the California Academy of Sciences, Sacramento City Councilwoman Heather Fargo "agrees that these [vulnerability to catastrophic floods] are good points [against the development of Natomas], but says they should have been made in 1978, before the 35,000 people moved into south Natomas. Now, she says, its too late. There's too much money invested and the city couldn't possibly compensate developers for their losses if it banned building in Natomas...."

From the same article; "Our view is that development is probably going to occur out there [the Natomas Basin], and there's not a lot we can do about it...." Tim Washburn, attorney for SAFCA.

STATEMENT OF THE TEHAMA-COLUSA CANAL AUTHORITY

Mr. Chairman, in October of 1988, the United States Department of the Interior, Bureau of Reclamation entered into a cooperative agreement with the Tehama-Colusa Canal Authority for the operation and maintenance of the Tehama-Colusa and Corning Canals. The water users through the Tehama-Colusa Canal Authority, have been responsible for these canal service area units of the Central Valley Project since November of 1988.

It is the intention and goal of the Board of Directors and staff of the Tehama-Colusa Canal Authority to operate and maintain these canal systems in an efficient and cost effective manner. In order to assure adequate funding for the operation and maintenance of the systems, the Tehama-Colusa Canal Authority will seek and support adequate funding for this and other elements of the Central Valley Project.

The Tehama-Colusa Canal Authority would like to assume the responsibility for the operation and maintenance of the Corning Pumping Plant during 1993. In addition to operation and maintenance activities, the Authority has assumed the responsibility for the construction of fencing on the Tehama-Colusa Canal to protect deer from drowning.

Our budget projections for fiscal year 1994 include the Corning Pumping Plant and are in the amount of $1,176,230. The costs of the operation and maintenance of the Corning Pumping Plant together with the Corning and Tehama-Colusa Canals are reflected in the California Water Commission's recommendation for fiscal year 1994.

The Tehama-Colusa Canal Authority is gravely concerned that inadequate appropriations for operation and maintenance of the Central Valley Project, and especially these particular canal systems, might well prevent a timely and cost effective repair and replacement of the necessary delivery facilities. We are further concerned that delays in funding much needed canal maintenance could well result in deterioration that would effect the ability to deliver irrigation water.

The Tehama-Colusa Canal Authority supports the $58,188,000 for operation and maintenance of the CVP of the Mid-Pacific Region in the California Water Commission's recommendation fiscal year 1994 but fully recognizes that this amount is inadequate to replace worn and damaged facilities. Contained within the Budget recommendation for the Central Valley Project are substantial sums for environmentally related work including: Delta water quality monitoring, Trinity River restoration, Suisun Marsh, NEPA compliance for contract renewals, CVP endangered species study, Winter-Run Salmon protection, and CVP fishery management plans. Also included is funding for Hazardous Waste assessment and disposal, and administrative costs. Twenty-three percent of the Bureau of Reclamation Central Valley Project Operation and Maintenance budget is for environmental related purposes.

Although environmentally related items are historically not typical operation and maintenance functions of delivery systems, they have been imposed on the Bureau of Reclamation as a responsibility. The inclusion of these and other environmental elements into the operation and maintenance budget creates the misleading impression that the total amount of the funding requested for the CVP is used for the operation and maintenance of the existing delivery facilities.

The water users in the service areas of the Tehama-Colusa and Corning Canals are deeply appreciative of the past assistance given by your committee for appropriations for canal and distribution system construction and operation and maintenance. This committee's recognition of much needed funding for operation, maintenance and rehabilitation of constructed facilities is welcome and refreshing to the water user.

STATEMENT OF THE COUNTY OF LOS ANGELES DEPARTMENT OF BEACHES AND HARBORS

Dear Chairman Johnston, the Los Angeles County Board of Supervisors respectfully requests the Congress of the United States include funds in the fiscal year 1994 Budget for the following three projects urgently required to preserve, restore and maintain vital and precious assets, the 75 mile shoreline of Los Angeles County and the recreational boating harbor at Marina del Rey.

Malibu coastal area shoreline protection study ($250,000).—The winter storms in 1983, 1988 and 1991 caused extensive damage to the Los Angeles County coast. In 1982–83 and 1988 the El Nino phenomena directly hit the Los Angeles County coast with unusually high tides and caused widespread damage to beaches and shoreline facilities estimated at over $20 million. While much of the sand has returned to the County's beaches and they appear to be significantly restored, the beaches remain extremely vulnerable to future storms. Healthy beaches are necessary, natural buffers to protect public facilities from the unpredictable forces of the ocean.

Funding of $250,000 is needed to complete the reconnaissance phase of this feasibility study to determine the most effective methods of shoreline protection at those points within Santa Monica Bay that are most vulnerable to future storm attack. Los Angeles County is prepared to provide local financial participation in the future for projects identified by this study. Because Los Angeles County has one of the most heavily urbanized and developed shorelines in the country, it is extremely important to fund and complete this study to help prevent future damage to significant public investments in shoreline facilities.

Marina del Rey entrance channel dredging ($2,105,000).—Marina del Rey provides nearly 6,000 berths for recreational boating. It is the largest man-made small craft harbor in the world, providing refuge for transient, as well as local boaters from the greater Los Angeles area. Especially on weekends and holidays, the harbor experiences significant boat traffic in the entrance channel, which is subject to shoaling from the normal regime of sand transport along the coastline and from Ballona Creek.

The U.S. Army Corps of Engineers is responsible for maintenance dredging of the Marina del Rey entrance channel pursuant to a perpetual right of way easement. This is to occur approximately every four years. The last dredging took place in

1987. However, only a small amount of the harbor sediments scheduled for removal were actually dredged at that time.

In Federal fiscal year 1993, funding of $1.4 million was available for dredging. However, environmental concerns prevented the full dredging and reduced the project scope to maintenance dragging of 17,000 cubic yards of shoaled material at the Marinas Entrance. Following storms this winter, restrictions to the entrance are rapidly growing worse and are threatening to impact boating safety and the ability of the U.S. Coast Guard, County Sheriff, Fire Department and lifeguards to respond to emergencies. As these agencies form the critical core of the LAX Air-Sea Disaster Response Team, it is imperative that the Marinas entrance channel remain open and safely navigable.

Marina del Rey Harbor navigation study ($275,000).—Shoaling of the Marinas navigation channel from sediment from Ballona Creek and other sources is causing frequent navigation problems. Additionally, contaminants in the Ballona Creek sediment are causing problems in disposing of the dredged material. Modifications to the existing Federal Project, including relocation of the Ballona Creek Flood. Control Outlet or a containment area for disposal of contaminated material, and other alternatives would be investigated in this proposed reconnaissance study as a means to resolve these problems.

The County is aware of the cost-sharing requirements for Corps' Feasibility Studies, and is able and willing to cost share subject to review of the Reconnaissance Study results and consideration of County Budget priorities at that time.

Every year there are growing demands and shrinking resources, making the allocation of these resources a difficult task. I trust your Committee will recognize the high priority associated with the projects discussed in this letter to protect major public and private shoreline facilities and developments.

STATEMENT OF THE CALIFORNIA WATER COMMISSION

Attached are the California Water Commissions final recommendations for appropriations for fiscal year 1994 funding for water, fishery and flood control programs in California. These recommendations were adopted by the Commission on March 5, 1993. The Commission understands that the numerical amounts in the Presidents Budget will not be known until April 5, 1993. The Commission supports continued funding of the projects listed on the attached tabulation in amounts adequate for their timely implementation. In the absence of better information, the dollar amounts for some of the projects were taken directly from fiscal year 1993 allocation information.

On Wednesday, March 24, 1993, the California Water Commission will present to the Congress California's recommendations for funding for water, fishery and flood control programs in California. Clair A. Hill, Chairman of the Commission's Federal Appropriations Committee, will summarize the Commission's recommendations and coordinate the statements of the individual agencies. Our Washington, D.C. schedule was contained in our letter to you dated February 23, 1993.

STATEMENT OF THE COUNTY OF SAN BERNARDINO BOARD OF SUPERVISORS

Dear Chairman Johnston, the Board of Supervisors of the San Bernardino County Flood Control District, State of California, appreciates this opportunity to submit these most critical flood control and water conservation project proposals for consideration in the fiscal year 1994 budget:

Corps of Engineers

Santa Ana River mainstem.—Estimated budget requirement for fiscal year 1994 is $100,000,000. Includes Seven Oaks Dam, San Timoteo Creek, Oak Street Drain and Santiago Creek. Your support of funding will continue design and construction of important flood protection works for residents of San Bernardino, Orange and Riverside Counties. Construction commenced during fiscal year 1990 and is progressing within schedule and budget.

Seven Oaks Dam water conservation.—Estimated budget requirement is $150,000. A reconnaissance study was completed during fiscal year 1993 to initiate a Feasibility Study for fiscal year 1994. Local funding for the study has been committed.

Mission Zanja Creek.—Estimated budget requirement is $341,100 to initiate a reconnaissance study for a major watershed that often floods within the Cities of Redlands and San Bernardino and the County.

Bureau of Reclamation (Public Law 84–984, Small Watershed Project Loan Program)

San Sevaine Creek water project.—Key features of the project are environmental enhancements, increased flood protection and annual water conservation for the Cities of Rancho Cucamonga and Fontana and the County. The State Water Commission recommended funding in the amount of $1,000,000 for an initial construction start.

The Board is proud to announce that Mill Creek Levee, one of the features of the Santa Ana River Mainstem Project, was completed this past year. Once again, the Board wishes to express its deep appreciation for your past and present support of these priority programs in San Bernardino County.

STATEMENT OF THE SANTA ANA RIVER FLOOD PROTECTION AGENCY

Statement of George Osborne, Executive Director, Santa Ana River Flood Protection Agency, in support of appropriation for continuing construction of the Santa Ana River mainstem project in the counties of Orange, Riverside and San Bernardino, California.

The Santa Ana River Flood Protection Agency, representing 26 cities and public agencies on the Santa Ana River flood plain in Orange County recommends, requests and urges a Fiscal 1994 appropriation for continuing construction of the Santa Ana River mainstem project equal to the full Corps of Engineers capability, currently estimated at $100,000,000.

The Congress has previously appropriated these amounts: Fiscal 1990, $20,000,000 (to begin construction); fiscal 1991, $46,000,000; fiscal 1992, $78,200,000; and fiscal 1993, $90,800,000.

Using these appropriations, the Corps has made good progress in the projects construction. Beginning at the Pacific Ocean, channel improvements have advanced about 5-miles upstream into Orange County. At the projects upper end, nearly 60-miles from the ocean, Seven Oaks Dam in San Bernardino County is under construction. Near the mid point of the project, lands are being acquired for the enlargement of the existing Prado unit of the project.

Despite the advancing construction work, a large part of Orange County is still vulnerable to a large loss of life and property damage in excess of $12 billion from a project flood due, in part, to the deficiency of Prado Dam. The Corps of Engineers completed Prado Dam under the authorization of the Flood Control Act of 1936 and based its design on hydrology available at the time and on assumptions as to future rates of sedimentation and urbanization, all of which later proved inaccurate in the Review of the Project for the Protection of the Metropolitan Area of Orange County authorized by the Committee on Public Works of the House of Representatives in 1964. Now the Corps predicts future devastating, uncontrolled flow over the dams spillway into Orange County in place of the previously planned capture of the 100-year and larger floods behind the dam with non-damaging controlled release. It is in the interest of all to remedy this deficiency as soon as possible by using the Corps of Engineers' full capability to the projects completion scheduled for year 2000.

In addition to the inability of Prado Dam and Reservoir to contain large floods without uncontrolled spillway discharge, there is reason for concern for the safety of the dam itself. The Corps of Engineers has determined that the existing spillway could not pass a maximum possible flood. While such a flood is a very remote possibility, its occurrence would overtop and destroy Prado Dam with unimaginable damage and desolation in heavily urbanized Orange County below. The reconstruction of Prado Dam as specified for the Santa Ana River Mainstem Project will provide a larger spillway capable of safely passing the maximum possible flood. This spillway deficiency should be corrected as soon as possible.

A third reason for urgency in advancing the construction of the project is that of flood insurance requirements imposed on so many property owners in Orange County on the 100-year flood overflow area identified by the Federal Emergency Management Agency (FEMA). A recent survey revealed annual insurance premiums paid by property owners in Orange County as follows:

City	Annual premiums	No. of policies
Anaheim	$190,785	676
Costa Mesa	522,037	1,449
Fountain Valley	3,157,840	8,692
Garden Grove	1,257,840	3,550
Huntington Beach	4,884,650	13,762

City	Annual premiums	No. of policies
Newport Beach	537,241	1,441
Orange	113,422	321
Santa Ana	4,029,780	11,612
Westminster	1,084,084	3,105
Total	15,782,315	44,608

The Corps of Engineers estimates that, with the completion of Seven Oaks Dam and the advancement of channel improvements from the Ocean to 17th Street in the city of Santa Ana, FEMA flood overflow maps could be changed to eliminate the 100-year flood plain areas, thereby relieving property owners of the necessity for the yearly premiums indicated above. This could be accomplished before the completion of the project and as early as 1997 by utilizing the Corps' full capability.

In summary, Prado Dam can control neither the project flood nor the 100-year flood and is not structurally safe for the maximum possible flood. The dams inability to control a 100-year flood imposed harsh flood insurance requirements on Orange County property owners. It has been 131 years since the Santa Ana River has produced a 100-year or larger flood. Time is running out, so an appropriation equal to the Corps' Fiscal 1994 capability for continuing construction of the Santa Ana River Mainstem Project is urgently requested.

SUMMARY

This is a request by Orange County, California, for your support of the funding required by the U.S. Army Corps of Engineers to maintain the planned construction schedule for the Santa Ana River Mainstem Project during fiscal year 1994.

The U.S. Army Corps of Engineers considers the Santa Ana River to be the most critical flood threat in the West. The most severe flood likely to occur could impact 3 million people, kill 3,000 people and destroy property valued at $15 billion in three urban Southern California Counties.

The Flood Control Districts of Orange, Riverside and San Bernardino Counties, have entered into a Local Cooperation Agreement with the United States Department of the Army to provide a minimum of 25 percent of the total Santa Ana River Mainstem project cost. Local Sponsors' costs are now estimated to equal 34 percent of the total project cost of $1.45 billion. Orange County's share is about $439 million; to date Orange County has allocated about $255 million to the Project.

Orange County has expended about $124 million toward its responsibilities in providing land and performing relocations to make way for construction of the Project. Local Sponsors have obtained possession of about 1,550 acres of land for mitigation and 1,500 acres for construction of the new Seven Oaks Dam. A hydroelectric plant and transmission lines impacted by the new dam are being relocated.

The existing Prado Dam will be raised about 28 feet to increase its flood control capacity. Right-of-way engineering is in progress for acquisition of about 1,600 acres for the larger reservoir. This land includes residences, dairies, farming operations, and citrus groves.

Land has been acquired to support the Corps expedited construction schedule to widen the lower Santa Ana River channel. Four bridges have been lengthened to span the widened river. The Talbert Channel ocean outlet has been relocated up coast to make way for widening the Santa Ana River ocean outlet. Ninety-two acres of degraded wetlands at the mouth of the Santa Ana River have been acquired and are being restored to mitigate project impacts and to enhance the habitat for endangered species. Orange County is developing a draft habitat management plan for preservation of open space and wildlife habitat in the Santa Ana Canyon below Prado Dam.

The Local Sponsors are providing cash contributions, acquiring property and performing relocations to enable the Corps to maintain its construction schedule for fiscal year 1994.

Your support of appropriations for continued construction of the Santa Ana River Mainstem Project is urged to provide citizens of Orange, Riverside and San Bernardino Counties with urgently-needed flood protection as early as possible.

FLOOD POTENTIAL—SANTA ANA RIVER

—Headwaters in San Bernardino Mountains—75 miles from Pacific Ocean

- —Drains 3,200 square miles in Orange, Riverside and San Bernardino Counties in Southern California
- —Flows through urban Cities of Colton, Riverside, Norco, Anaheim, Orange, Santa Ana, Fountain Valley, Costa Mesa and Huntington Beach.

Floods in Orange County

- —1938, greatest flood of this century, northern half of the County under water; almost all bridges destroyed, serious damage to agricultural land, which is now an urban area.
- —1862, greatest flood on record, approximating the Corps Standard Project Flood

Estimated damage

- —Standard Project Flood would exceed capacity of Prado Dam.
- —Levees would be breached; flooding 110,000 acres from Anaheim to the ocean could impact 3 million people, kill 3,000 people and destroy property valued at $15 billion.
- —Major transportation corridors would be interrupted: San Diego, Garden Grove, Santa Ann, Costa Mesa and Grange Freeways, Stations and Track.
- —Major public facilities would be inundated: Anaheim Convention Center, Angel Stadium, Disneyland, Knotts Berry Farm, Crystal Cathedral, Hospitals, Colleges, Hotels, Shopping Centers and Sanitation Plants.

PROJECT DESCRIPTION

The Santa Ana River Mainstem Project is located in Southern California and is comprised of several features located in Riverside, San Bernardino and Grange Counties.

The Seven Oaks Dam, Mill Creek Levee and San Timoteo Creek improvements are located in San Bernardino County; Oak Street Drain is located in Riverside County; Prado Dam and Reservoir is located in San Bernardino and Riverside Counties; the Lower Santa Ana River Canyon is located in San Bernardino, Riverside and Grange Counties; and Santiago Creek, Lower Santa Ana River and the Marsh Restoration are located in Grange County.

Lower Santa Ana River

Estimated cost, $457 million; estimated completion, 2000.

- —Improve 23-mile channel from Prado Dam to the Pacific Ocean
- —Increase channel capacity from 28,000 to 47,000 cfs at Pacific Ocean
- —Restore/enhance 92 acre (8 acres mitigation) wetlands
- —Acquire 1,123 acres of canyon lands to ensure safe releases from Prado and provide open-space habitat
- —Relocate 60 various utility lines and 15 oil wells/lines
- —Modify 17 bridges

Prado Dam

Estimated cost, $415 million; estimated completion, 2000.

- —Raise the dam from elevation 566 to 594.4 feet, +28.4 feet
- —Increase reservoir area from 6,695 acres to 10,256 acres
- —Impoundment from 212,000 to 362,000 acre-feet
- —Increase capacity of outlet gates from 9,200 to 30,000 cfs
- —Acquire about 1,600 acres of new flowage easements
- —Relocate or protect 30 various utility lines
- —Raise State Highway Route 71

Seven Oaks Dam

Estimated cost, $455 million; estimated completion, 1997.

- —550-feet-high, earthrockfill dam, 2,980 feet long
- —Gross capacity of 145,600 acre feet
- —Reduces peak inflow of 85,000 cfs to a peak outflow of 7000 cfs
- —Requires about 2,900 acres of land or easements
- —Relocations: powerhouse, flume and transmission line; spreading basins, waterwells.

STATEMENT OF MARY K. SHELL, SUPERVISOR, FIFTH DISTRICT, KERN COUNTY, CA

Dear Mr. Chairman and members of this subcommittee, I am Mary K. Shell, Supervisor, Fifth District in Kern County, California. I am here to support the President's Proposed Budget allocation of $300,000 for the Caliente Creek Flood Control Project. I am joined in this support by the Kern County Water Agency, represented here today by Mr. Stuart T. Pyle, as well as by the Lamont Storm Water district and the City of Arvin.

Kern County has entered into a second cost-sharing agreement with the Corps of Engineers for a flood water management plan for this rapidly growing area of Kern County. You may recall that the plan for a flood control storage reservoir developed under the first cost-sharing agreement signed in 1985—the first in the nation—proved to be not economically feasible. We are now working with the Corps of Engineers to develop a plan for a system of levees, channels and control structures to protect the urban and suburban areas of Lamont and Arvin from the disastrous flooding that has occurred eight times in the past sixty years.

With the initiation of the new study in October of 1992, the major study components including hydrology, economics and environmental concerns will be completed by October of 1993 and the Corps will be ready for plan formulation, cost estimates and economic analyses to form the basis for the feasibility report due under this study at the end of the 1994 fiscal year. As you can see, with the work now underway with funds made available in the current year budget it is critical to receive the amount requested in the President's Proposed Budget.

We are well aware that this is a difficult budget year with the President and Congressional leaders calling for drastic budget cuts. We hope that you note that every dollar that you appropriate for this project is matched with a local tax dollar in either cash or in-kind services to pay for and to support the work of the Corps of Engineers. As a County Supervisor, I can tell you that the need has to be there for me to get the support from other Supervisor's and the districts that are sharing in the local expense. We are optimistic that by the end of the 1994 Fiscal Year that we will have a flood water management plan that will provide the protection the people of this area have been seeking for so long.

We deeply appreciate the support of this committee over several difficult years of moving this study ahead and urge your continued assistance.

STATEMENT OF THE SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Dear Chairman Johnston, the Santa Barbara County Flood Control and Water Conservation District as local sponsor respectively requests a $600,000 appropriation in fiscal year 1993–94 to continue the Corps of Engineers Preconstruction, Engineering and Design (PED) for the Carneros Creek Project located in the Goleta vicinity of Santa Barbara County, California.

The Carneros Creek Plan consists of a debris basin and detention basin that would provide flood protection to the Santa Barbara Airport as well as commercial and industrial areas that house high-technology, research and development and data processing firms. In addition, the project will reduce the flooding of and enhance water quality conditions in the Goleta Slough.

The Carneros Creek Plan was a part of a previously authorized project in the Goleta Valley of Santa Barbara County (Goleta and Vicinity, California, 1970). However, the previously authorized project was neither publicly accepted nor economically justified. The results of a re-evaluation study recommended a focused Carneros Creek Plan as an economical solution for providing standard project flood protection.

Because of the significant difference in scope between the previously authorized plan and the recommended Carneros Creek Plan, new authorization was required. Authorization was given for the Carneros Creek Project by modifying the previous project via the Water Resources Development Act of 1992. The total project cost, including PED, is estimated to be $7.5 million.

The Carneros Creek Plan is a result of over 20 years of public involvement and coordination. This project is both needed and supported by the community. As local sponsors, the District requests appropriations in fiscal year 1993–94 to continue the PED effort. Thank you for your consideration of our request.

STATEMENT OF THE CITY OF STOCKTON, CA

Mr. Chairman and members of the committee, the City of Stockton supports the following Corps of Engineers and Bureau of Reclamation water, flood control and fishery projects:

Sacramento-San Joaguin delta investigation	$900,000
San Joaguin River mainstream	325,000
American and Sacramento Rivers	NA
Auburn-Folsom South Unit	NA

American River Folsom South optimization study	NA
San Joaquin River resource management initiative	NA

U.S. CORPS OF ENGINEERS

Sacramento—San Joaquin delta investigation, $900,000.—This important investigation is being conducted jointly with the California Department of Water Resources. The study will examine alternatives to improve flood control, water supply and environmental concerns such as riparian vegetation and water quality in the Delta. This study is of paramount importance in regard to current and future California Water needs.

San Joaquin River mainstream, $325,000.—The City supports the funding of $325,000. This study would address the difficult sedimentation problems experienced along the San Joaquin River flood system, which contributes significantly to flooding and other problems.

American and Sacramento Rivers.—The City of Stockton supports the Corps of Engineers and cooperating local agencies in their combined efforts to eliminate the serious flood threat to the metropolitan Sacramento area. The studies need to Provide for development of a much needed water supply from the American River. Any dam that is considered for the American River should be multipurpose. It would be wasteful to construct a flood control only dam when there is such an urgent need for water in San Joaquin County and elsewhere in our State. Stockton should have priority for any new water developed from the project as it has requested American River water from the Bureau of Reclamation in the past and in turn has been denied other sources under the assumption that American River water would be available.

BUREAU OF RECLAMATION

Auburn-Folsom South Unit.—This project is funded only for maintenance of lands acquired for the Auburn Dam and for miscellaneous personnel support. The city of Stockton is concerned that the project is not addressing the water needs of this area as originally intended. The Bureau should be directed to consider the extension of the Folsom South Canal and the provision for water supply for San Joaquin County. We also recommend that the study include the evaluation of various sized multipurpose projects at the Auburn site: To this end, the city requests that the budget be increased from $1,500,000 to $2,250,000 to support these additional investigations.

American River Folsom South optimization study.—This study could provide an opportunity to gain additional water for the city's watershed. The study will evaluate plans for concurrent surface and groundwater use from existing storage developments and tributary streams to meet Folsom South Area water needs and provide suitable instream flows for fishery and recreation purposes in the lower American River.

San Joaquin River resource management initiative.—This study will look at the potential for integrated operation of the San Joaquin Basin reservoirs, conjunctive use of surface and groundwater, and the rehabilitation of existing conveyance facilities as a means of providing water for fishery restoration and other environmental improvements.

RESOLUTION 93–0099 OF THE STOCKTON CITY COUNCIL

Whereas, on March 23, and 24, 1993, appropriate committees of the Congress of the United States will conduct hearings to consider federal appropriations for water, flood control, and fishery projects for fiscal year 1994; and

Whereas, several projects to be considered at said Congressional hearings will directly impact the City of Stockton and its environs; and

Whereas, expeditious construction of said projects is required to protect the health, welfare and safety of the residents of this area; now, therefore,

Be it resolved by the Council of the City of Stockton as follows:

That the City Council hereby authorizes Councilmember Nick Rust to attend the Congressional hearings and make a personal presentation of the Councils recommendations as set out in the Statement by the City of Stockton, California, before the Committee on Appropriations, Subcommittee on Energy and Water Development of the Senate and House of Representatives.

Passed, approved and adopted March 8, 1993.

RESOLUTION 93–0098 OF THE STOCKTON CITY COUNCIL

Whereas, on March 23, and 24, 1993, appropriate committees of the Congress of the United States will conduct hearings to consider federal appropriations for water, flood control, and fishery projects for fiscal year 1994; and

Whereas, several projects to be considered at said Congressional hearings will directly impact the City of Stockton and its environs; and

Whereas, the expeditious construction of said projects is required to protect the health, welfare and safety of the residents of this area; now, therefore,

Be it resolved by the Council of the City of Stockton as follows:

1. That the City of Stockton does hereby support the appropriation by the Congress of the United States of funds for fiscal year 1994 for the planning, continuation and completion of flood control and reclamation projects, namely:
   a. Sacramento-San Joaquin delta investigation
   b. San Joaquin River mainstream
   c. American-Sacramento Rivers
   d. Auburn-Folsom South Unit
   e. American River Folsom South optimization study
   f. San Joaquin River resource management initiative
2. That the Statement by the City of Stockton, California, before the Committee on Appropriations, Subcommittee on Energy and Water Development of the Senate and House of Representatives is hereby approved as the official Statement of the City Council. A copy of said document is attached as Exhibit “A” and incorporated by this reference.
3. That the Mayor is hereby directed to forward a copy of said Statement to the appropriate Congressional Committees and to the City of Stockton’s representatives in the Senate and House of Representatives, and the City Manager will monitor and initiate proper follow-up communication and correspondence to reflect the City Council’s position.

Passed, approved and adopted this 8th day of March 1993.

STATEMENT OF THE MONTEREY COUNTY WATER RESOURCES AGENCY, CA

The Monterey County Water Resources Agency is a local government entity formed under the California Water Code. It is an agency with limited jurisdiction involving matters related primarily to flood control and water resource conservation, management, and development. Originally formed in 1947, the agency’s initial actions were the construction of Nacimiento and San Antonio dam to replenish and maintain the Salinas Valley groundwater basin as a potable and irrigation water supply for the valley. However, while those projects met the objective in the upper portion of the valley, it became apparent in the late 1960’s that an additional water supply would be necessary to slow or halt intrusion of seawater from Monterey Bay into the Salinas Valley groundwater basin.

During the past 25 years a number of studies and investigations have been completed by local entities as well as federal agencies. Solutions identified were not politically and/or financially feasible, until, during the past 10 years, a 16 member seawater intrusion committee developed a Seawater Intrusion Program that includes using reclaimed wastewater for the required additional water supply. However, the financial feasibility of this plan depends on the availability of federal funds through the Small Reclamation Projects Act (Public Law 84–984, as amended).

The project area is located in the Salinas Valley, on the central coast of California, near the town of Castroville. Seawater intrusion into groundwater aquifers has required the abandonment of wells and threatens agricultural production and the loss of a portion of rural America. If lands in the Castroville area go out of production up to 6,000 jobs could be lost. This would be in addition to the expected loss of 30,000 jobs when facilities at the nearby Fort Ord close. Currently unemployment in the Castroville area is more than 20 percent. Federal funding for this project will not only prevent the loss of jobs in the future but could create more than 2,000 jobs during the design, manufacturing, and construction phases of implementation.

Federal funds requested are a loan under the Public Law 984 program and will be repaid by landowners in the Salinas Valley. Assessment procedures are currently in place to collect funds required to operate the project and repay the federal loan.

Additional background information, project concepts, operational plans, and project costs are described for the Castroville Water Distribution Project and a companion reclaimed water treatment project (proposed by the Monterey Regional Water Pollution Control Agency) in the attached informational brochure. The expected source of funds required for the Castroville project are as follows:

Public Law 84–984 loan	$32,600,000
Other financial sources	10,910,000
Total	43,510,000
Fiscal year 1994 request	5,410,000

MRWPCA

Salinas Valley Reclamation and Irrigation Projects

Seawater intrusion has accentuated the critical need for water in Northern Monterey County.

There are three separate groundwater aquifers in the northern part of the Salinas Valley. (An aquifer is a water-bearing layer of rock, sand, or gravel.) One is located about 180 feet below the surface, one about 400 feet, and one about 900 feet. Seawater has moved into both of the upper aquifers near the coast (Figure 1), but not the 900-foot aquifer. This intrusion has made the groundwater so salty that it is unusable for crop irrigation or municipal use

Seawater intrusion has two causes. The primary cause is excessive groundwater pumping in the valley The second cause is the lack of replenishment of fresh groundwater from other parts of the valley.

Seawater intrusion can have a number of effects, including loss of agricultural jobs, curtailment of growth, reduction in land values, and an increase in the cost of water. The seriousness of these effects has generated the need for a combination of solutions, which fall into three general categories: (1) reduce the amount of groundwater consumed, (2) increase the amount of water replenished into the aquifer, and (3) find other

Benefits of the Projects

- Provide a new water source of up to 30,000 acre-feet per year.
- Reduce groundwater withdrawal in seawater intruded aquifers.
- Stabilize the local agricultural economy.
- Reduce wastewater discharge to Monterey Bay.
- Reduce artificial fertilizer needs

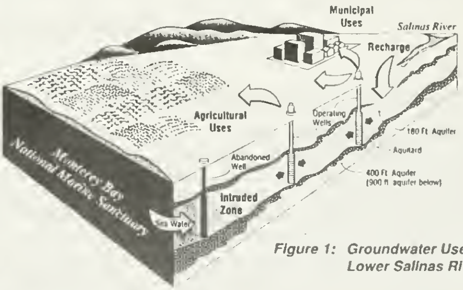


Figure 1: Groundwater Uses in the Lower Salinas River Basin

Monterey Bay National Marine Sanctuary

Maintaining and enhancing the environment is a key objective of the Reclamation and Castroville Irrigation projects. By reclaiming wastewater MRWPCA currently discharges to Monterey Bay, the quality of the Bay and the proposed Monterey Bay National Marine Sanctuary will be enhanced.

Monterey Bay and its adjoining waters provide one of the richest, most varied marine environments along the Pacific coast. Among the region's special features and resources are: the Monterey Submarine canyon (the largest on the West Coast), kelp forests, invertebrates, marine mammals, sea and shore birds, fisheries, extensive recreation and tourism opportunities, and scientific and research facilities. To protect these resources, a National Marine Sanctuary, extending from the existing Gulf of Farallones sanctuary (near Point Reyes) south to near San Luis Obispo, has been proposed under the auspices of the National Oceanic and Atmospheric Administration. These boundaries encompass an area of approximately 4,024 square nautical miles.

sources of water besides groundwater. Groundwater consumption is being reduced through efforts of the Monterey County Water Resources Agency (MCWRA), which is working with farmers to implement water conservation measures.

Replenishment of the aquifer occurs primarily by percolation through the beds of the Salinas River and its tributaries. One method to increase this percolation is to keep water in the river most of the year. Two reservoirs were constructed to provide year-round flows—Nacimiento Dam, completed in 1957, and San Antonio Dam, completed in 1965. These reservoirs have stabilized groundwater levels in the southern part of the valley (near the reservoirs), but, because much of this groundwater is intercepted before it reaches the intruded portions of the aquifers, they have only provided a partial solution to the seawater intrusion problem.

The third and most effective method of reducing the rate of seawater intrusion is to find alternative water sources. In 1982, the Arroyo Seco Project, a reservoir and water distribution system, was proposed. However, widespread support for this project did not develop, and the project was not pursued. The water source that has become the most viable is highly-treated wastewater, termed "reclaimed water."

As a result of the efforts to date, a proposed solution to the seawater intrusion problem—the Seawater Intrusion Program—has been developed, a major component of which is a reclaimed water irrigation supply to farmers in the Castroville area. Using a partnership approach, the Monterey Regional Water Pollution Control Agency (MRWPCA) and MCWRA are developing this supply, which contains three components (Figure 2):

1. The Monterey County Reclamation Project (proposed by MRWPCA), which consists of a reclamation plant and transmission pipelines to the irrigation distribution system.
2. The Castroville Irrigation Water Supply Project (proposed by MCWRA), which consists of an irrigation distribution system to the farms and back-up (standby) wells.
3. A seasonal storage facility, which may be implemented in the future to store excess wintertime reclaimed water flows for later use during peak summertime irrigation periods.

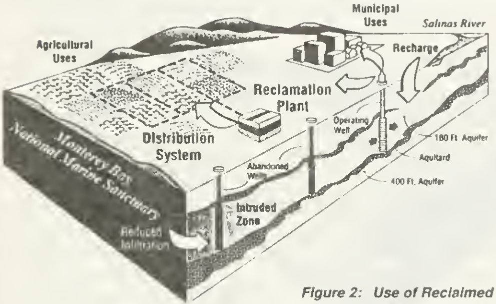


Figure 2: Use of Reclaimed Water in the Seawater Intrusion Program

Development of the Reclamation Concept

Important steps have already been taken to develop reclaimed water as a valuable new resource.

As part of the environmental approval process for developing reclamation, MRWPCA completed studies on the safety of using reclaimed water for irrigation of food crops. The Monterey Wastewater Reclamation Study for Agriculture (MWRSA) consisted of full-scale field tests conducted between 1980 and 1985 using reclaimed wastewater on various food crops, including artichokes, celery, broccoli, lettuce, and cauliflower.

Extensive crop and effluent testing was done. The conclusions were published in 1987 and confirmed that tertiary treated wastewater could be safely used for all types of irrigation of these uncooked food crops.

Based on the results of the MWRSA project, the California Department of Health Services (DOHS) issued new criteria governing reclaimed water irrigation of uncooked crops (referred to as "nonprocessed food crops"). The Monterey County Department of Health reviewed the DOHS recommendations and concurred. These new criteria will be used in the design and operation of the new reclamation system.

Balancing Reclaimed Water Availability and Demands

Storage and alternative uses must be considered to optimize use of reclaimed water.

Reclaimed water will be produced at a relatively constant rate throughout the year (Figure 3). However, agricultural irrigation demand varies significantly over the year. During the winter, there will be more reclaimed water available than can be directly used for irrigation, while in the summer, irrigation demand will exceed the available reclaimed water supply. Assuming an initial average annual wastewater flow rate of 23 mgd, 17,600 acre-ft out of a total of 25,800 acre-ft of reclaimed water will be directly available to the Castroville Project each year (Table 1). The remaining summertime irrigation demand would need to be met by the stand-by wells. The excess winter reclamation flows (8,200 acre-ft) would be available for other uses. In the future, annual available reclaimed water is expected to increase to 33,200 acre-ft with 21,300 acre-ft directly available for irrigation.

In order to make full use of all available reclaimed water, storage of the excess winter reclaimed water must be provided. This seasonal storage could be provided in an aboveground (surface) reservoir or by storage underground in an existing intruded groundwater aquifer and pumping out later. Such underground storage is termed aquifer storage and recovery, or ASR (Figure 4). Both types of seasonal storage are currently being evaluated.

While crop irrigation demands for reclaimed water are high, the potential also exists to use a portion of future reclaimed water flows for other urban uses, such as golf course irrigation or road median landscape irrigation. The amount currently set aside for urban uses totals 3,800 acre-ft. Several area agencies are currently evaluating opportunities to use this reclaimed water as it becomes available.

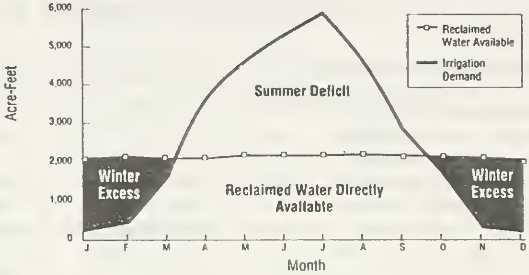


Figure 3: Reclaimed Water Availability and Use

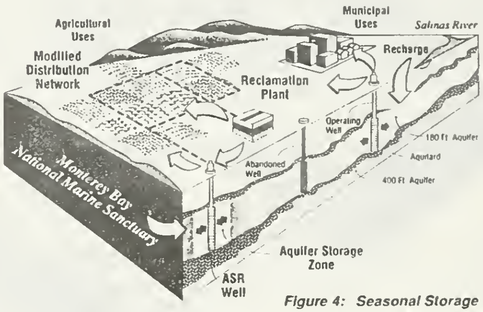


Figure 4: Seasonal Storage of Reclaimed Water

Table 1: Summary of Irrigation Demand and Reclaimed Water Availability (Acre-Feet/Year)

Category	1995 (23 mgd)[a]	Future (29.6 mgd)[a]
Total Castroville Irrigation Project (CIP) Demand	31,500	31,500
Total Reclaimed Water Available	25,800	33,200
- Reclaimed water available for CIP during peak irrigation season	17,600	21,300
- Reclaimed water available for storage or other uses[b]	8,200	11,900

[a] Average wastewater flow rate in million gallons per day

[b] Available during off-peak periods (primarily November through February)

Planning and Building the Two Projects

Plans are currently underway to develop treatment, delivery, and distribution systems.

Table 2: Sources of Project Funding

Source	MRWPCA Project	% of Total	MCWRA Project	% of Total
U.S. Bureau of Reclamation Loan	$20,540,000	75	$32,600,000	75
State Water Resources Control Board Loan	5,900,000	21	0	0
Other Financial Sources	1,000,000	4	$10,910,000	25
TOTAL	$27,440,000	100	$43,510,000	100

MRWPCA is currently in the preliminary design stage of its reclamation facilities. These facilities will use the processes developed during the MWRSA project and approved by DOHS. Downstream of the existing secondary treatment process, the following tertiary processes will be built: chemical addition, flocculation basins, filters, and disinfection facilities. Flow leaving the disinfection facilities will meet the DOHS health criteria. A small "balancing" reservoir will be provided to help match reclaimed water flow rates to daily fluctuations in irrigation demand. The last component of the Reclamation Project is a transmission pipeline that will carry the reclaimed water across the Salinas River to the irrigation distribution system.

MCWRA is also currently in the preliminary design stage of its irrigation system. This system will consist of a network of smaller pipes, which will terminate at "turnouts" at approximately 150 farms. These turnouts will be designed to deliver a flow rate of 15 gallons per minute per acre of farmland served. The Castroville Project facilities will also include existing pumps and standby wells to supplement the reclaimed water supply.

Funding for the two projects is expected to come from three sources (Table 2). MRWPCA and MCWRA are currently pursuing loans from the U.S. Bureau of Reclamation (BuRec) for their respective projects. The BuRec loans would cover approximately 75 percent of the cost of each project. MRWPCA has also applied for a loan from the California State Water Resources Control Board.

Provided that the BuRec loan application is approved by October 1992, work will start at that time on the final design of the two projects, including pilot testing of the tertiary treatment processes. Facility designs could be completed by July 1993, with construction starting in October 1993. A 24-month construction period is anticipated.

Other implementation tasks currently underway include:

- An investigation of aquifer storage and recovery, funded jointly by BuRec and the local agencies
- An application to the Corps of Engineers for a Section 10 (404) permit for the Salinas River transmission line crossing

STATEMENT OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Dear Senator Johnston, I am writing to request your support for adequate federal funding for the Department of the Interior's Colorado River Salinity Control Program (Program). This Program was authorized by Congress under the Colorado River Basin Salinity Control Act and the Clean Water Act. The Metropolitan Water District of Southern California is responsible for meeting the supplemental water requirements of nearly 16 million people and the economy which supports them. In 1992, Colorado River water was used to meet the majority of these supplemental needs.

Metropolitan is concerned with maintaining the quality of this vital source of water supply. The Colorado River Board of California and the Colorado River Basin Salinity Control Forum, the interstate organization responsible for coordinating the Basin states' salinity control efforts, have recommended a 1994 funding level of $32.8 million for construction and plan formulation. This level of funding is necessary to meet the salinity control activities schedule in order to maintain the water quality standards adopted by the seven Colorado River Basin states and approved by the Environmental Protection Agency. These funds could be utilized for the continuation of canal and lateral lining in the Grand Valley of Colorado, and construction of facilities to dispose of salt brines in the Paradox Valley of Colorado. The funds could be used also for construction in the Lower Gunnison area of Colorado so that the winter stockwater supply can be placed in pipelines, and in southwestern Colorado for construction of the salinity control features of the Dolores Project. In addition, the funds could be employed for further analysis of salinity control opportunities in Utah, New Mexico, and Colorado and to investigate opportunities to remove additional salts from non-point sources.

Metropolitan concurs with the recommended funding level of $32.8 million for construction and plan formulation for the Bureau of Reclamation (Reclamation). Finally, Metropolitan supports funding levels for Reclamation that will ensure adequate operation and maintenance of constructed salinity control facilities. Your assistance and support in ensuring sufficient funding of the Colorado River Salinity Control Program for 1994 and beyond would be greatly appreciated by Metropolitan.

SUBCOMMITTEE RECESS

Senator JOHNSTON. With that, the subcommittee stands in recess until Monday morning at 10 a.m.

[Whereupon, at 3:20 p.m., Wednesday, March 24, the subcommittee was recessed, to reconvene at 10 a.m., Monday, March 29.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1994

MONDAY, MARCH 29, 1993

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD–192, Dirksen Senate Office Building, Hon. J. Bennett Johnston (chairman) presiding.

Senators present: Senator Johnston.

NONDEPARTMENTAL WITNESSES

OPENING REMARKS

Senator JOHNSTON. The subcommittee will come to order.

I want to welcome everybody here today, particularly those from my part of the country. More showed up than we had counted on, which we are very glad for, but if we knew so many were coming, we would gotten a larger room.

But as we say in politics, it is always better to have a small room that is crowded than a big room where people rattle around in. A big room where people rattle around in looks like you do not have support for whatever you are trying to do.

We are going to begin this morning with three very distinguished people, my colleague from the great State of North Dakota, Senator Byron Dorgan, who is going to introduce his Governor and talk about a project that I have worked on for many years with, as have these gentlemen from North Dakota.

So, we are glad to welcome you both, Byron. Welcome to our committee.

GARRISON DIVERSION PROJECT, NORTH DAKOTA

STATEMENT OF HON. BYRON DORGAN, U.S. SENATOR FROM NORTH DAKOTA

Senator DORGAN. Senator Johnston, thank you very much. And all of the people in this room are here in support of the Garrison diversion project in North Dakota, that too, we hope. [Laughter.]

It is my pleasure to introduce you today to the new Governor of North Dakota, Governor Ed Schafer.

On the House side for 12 years, Mr. Chairman, I have been testifying and introducing governors to the Appropriations subcommittee, and I must say that this project has been a project that is supported by Democrats and Republicans alike. We have worked closely together with Republican and Democratic Governors.

FUNDING REQUEST

This is an issue that is critically important to the State of North Dakota. We are asking this year for $41.9 million to continue appropriations for this project. I want to just, in a thumbnail, say that this was promised to us in the midforties, authorized in the sixties, and has been limping along ever since.

We appreciate the support you, Senator Johnston, and others have given us, but we feel very strongly that it is time for the Federal Government to finally keep its promise with aggressive funding to get this project completed.

We did not go to anybody to ask them to build a permanent flood in North Dakota. The Federal Government came to us and said, Can we flood you permanently? If you allow us to do that, we will promise you a diversion project.

Well, we allowed that. The flood came. They can now play softball in the evenings in Kansas City, because it does not flood downstream. We got all the costs upstream, but we have never quite gotten all the benefits.

The completion of this project is critically important to the economy of North Dakota, to giving us the benefits we were promised. That is why on a bipartisan basis the entire Congressional delegation for decades and the Governors of North Dakota have been very strongly in support of this project.

I am very pleased that Governor Ed Schafer is with us today and the congressional delegation, to represent the State and our continuing support to complete this project.

[The statement follows:]

STATEMENT OF SENATOR DORGAN

Dear Mr. Chairman, attached for your consideration are a general explanation and point-by-point justification of North Dakota's request for continued development of the Garrison Diversion Project.

As you know, this much-delayed project is central to my state's plans for reasonable use of the Missouri River, our foremost surface water source, for municipal, recreational, wildlife enhancement and irrigation purposes. The funds are for continued construction, but much of the money is devoted to the careful assessments and studies that must precede each element of the project. I sincerely hope that you will agree with these funding requests for fiscal year 1994.

Thank you in advance for your consideration and cooperation.

This year, the Garrison Diversion Conservancy District and the State of North Dakota are requesting $41.9 million fiscal year 1994 appropriations for the Garrison Diversion Project in North Dakota. With the passage of the Garrison Reformulation Act of 1986 the State of North Dakota has undertaken a major effort to develop and build a project that passes environmental muster, meets the economic realities of today, and addresses the present and future water development in North Dakota.

This request will help fulfill the Federal Government's ongoing commitment to the people of North Dakota. That obligation results from the building of an enormous flood control structure, the Garrison Dam and Reservoir, to protect downstream states and to enhance their river transportation. The reservoir flooded a Rhode Island-size section of prime farm land and caused untold hardships for two North Dakota American Indian tribes. In return, the state and tribes were to receive the benefits of a comprehensive water development project. To date, that project is still more promise than reality.

The request by the State of North Dakota for fiscal year 1994 work by the Bureau of Reclamation for the Garrison Diversion Unit primarily funds additional studies and construction of needed municipal, rural, and industrial water supplies. Funding would also support fish and wildlife facilities for the principal refuges, the Wetlands Trust authorized under the Garrison Reformulation Act, and completion of selected recreation facilities.

The funding request further includes money for critical Indian municipal rural and industrial work to proceed so that the cornerstones of economic development in North Dakota can be put in place by starting the studies and soil assessments for irrigation development on the Standing Rock Sioux Reservation.

Besides funding Garrison priorities, Congress must keep the project on schedule by ensuring the timely coordination and completion of the Bureau of Reclamation Sykeston Canal Alignment Study and the U.S. Army Corps of Engineers Devils Lake Study. This effort requires that necessary funding be included in the fiscal year 1994 budget. To that end the request includes money to begin the Draft Environmental Impact Statement process of identifying a "preferred" alternative means of connecting the McClusky and New Rockford Canals.

The attached "justification sheet" for the project that has been developed by the State of North Dakota provides additional details of the work planned for the next fiscal year.

Garrison Diversion Unit—Fiscal year 1994

Feature/activity	*Proposed budget*
Supply system/OM&R	$2,000,000
Supply system/studies EIS	500,000
Oakes Test Area/research	1,600,000
Irrigation, non-Indian[1]	2,200,000
Irrigation, Indian	2,000,000
State MR&I	20,000,000
Indian MR&I	3,700,000
Wetlands trust	2,100,000
F&WL facilities	7,000,000
Recreation facilities	800,000
Total Federal cost	41,900,000

[1] Turtle Lake.

BACKGROUND JUSTIFICATION SHEET FOR $41.9 MILLION GARRISON DIVERSION UNIT BUDGET REQUEST FOR FISCAL YEAR 1994

Feature/activity

Supply system/OM&R (proposed fiscal year 1994 budget: $2 million).—Major slides remain unrepaired, needed beach belting to prevent the occurrence of future problems remains undone, and expensive slide repair continues to be unfunded at considerable risk. In actuality, the supply works have design deficiencies and preventive maintenance needs of nearly $30 million.

Supply system studies and EIS (proposed fiscal year 1994 budget: $500,000).—This funding will be used to carry out the directives to the Bureau of Reclamation in the fiscal year 1993 Energy and Water Appropriations bill with respect to the study of Sykeston Canal alignments and begin work on the Draft Environmental Impact Statement. The Sykeston Canal study is due to be completed by March 31, 1994.

Oakes Test Area/research (proposed fiscal year 1994 budget: $1.6 million).—This funding will continue the operation and maintenance of physical facilities and studies associated with the research program that was authorized under the 1986 Garrison Reformulation Act.

Irrigation, non-Indian (proposed fiscal year 1994 budget: $2.2 million).—Funding is requested to continue with the work done by an interdisciplinary task force for irrigation in the Turtle Lake area adjacent to the McClusky Canal. Additional funding is needed to allow the Bureau of Reclamation to go forward with a more detailed examination of the plan and an environmental analysis of the impacts associated with the proposal working towards the implementation of the plan. This study includes many facets, including evaluation of waterfowl management in irrigated areas used jointly for forage production.

Irrigation, Indian (proposed fiscal year 1994 budget: $2 million).—Minor study activities will continue along with construction in the Shade Hill Reservoir area for the Standing Rock Sioux Tribe.

Indian MR&I (proposed fiscal year 1994 budget: $3.7 million).—This represents the amount of authorization that was made possible by indexing this part of the project during the consideration of PL 102–575 (The Reclamation Projects Authorization and Adjustments Act of 1992).

Wetlands trust (proposed fiscal year 1994 budget: $2.1 million).—This represents the required contributions to the Wetlands Trust Fund for wetlands development and enhancement on many sites statewide.

Fish and wildlife facilities (proposed fiscal year 1994 budget: $7 million).—Mitigation efforts will continue primarily at the principal refuges, including the Audubon and Arrow Wood refuges.

Recreation facilities (proposed fiscal year 1994 budget $800,000).—With the completion of land acquisition, this funding will allow for construction completion at selected recreational facilities, including those at Devils Lake State Park, Sheyenne Grasslands State Park, and the Jamestown Reservoir area.

STATEMENT OF HON. ED SCHAFER, GOVERNOR OF NORTH DAKOTA

Senator DORGAN. Let me introduce Governor Schafer.

Senator JOHNSTON. Governor, welcome.

GOVERNOR SCHAFER. Good morning. Thank you, Mr. Chairman, and thank you for the opportunity to appear today on behalf of the State of North Dakota and to urge adequate funding for the Garrison diversion project for fiscal year 1994.

This project is designed to meet the contemporary water needs in North Dakota and is one of the most environmentally sound projects in this country.

Not only is the project being fully mitigated, but its enhancement features for wildlife habitat go beyond the original scope of the project. The project's municipal, rural, and industrial water supply component also is an innovative approach to providing for human needs.

If we can get clean, safe drinking water to our people, industry and jobs will follow. Agriculture is the economic cornerstone in North Dakota and it will benefit from water development.

Water for specialty crops and forage crops, water for value-added processing, all contribute to enhance agriculture. All of this will mean vital rural economic development and funding will have an immediate impact, with economic stimulus for a continuing project.

Our testimony includes the problems of providing clean, safe drinking water to many communities. Our Indian reservations, too, must have adequate funding under the Indian MR&I authority in this project.

In 1994 we must move forward to provide treated drinking water to eastern North Dakota, especially to Devil's Lake. A more than $30 million a year recreation industry has endangered Devil's Lake, if we are not able to stabilize the water. Also, the Fort Totten Sioux culture suffers because the viability of Devil's Lake is threatened.

We must initiate the next step in project development, an environmental impact statement to allow us to complete the connecting link between the McClusky Canal and the New Rockford Canal.

Further, work at the Oaks test area and the Turtle Lake demonstration area will allow and help us to show that agriculture interests and wildlife interests can be addressed in mutually beneficial water development projects.

What we are doing at these two locations has merit for consideration for projects across this Nation. Today we are asking for an appropriation of $41.9 million for fiscal year 1994.

Water development is one area that will help our future economy. Water development means jobs, both now, during the project development, and in the future, as our cities and rural areas have clean, safe water available to them. Water development in North Dakota is economic development, and we all must work toward that goal.

I would like to enter into testimony, along with my prepared statement, the comments of Wilbur Wilkinson, chairman of the Three Affiliated Tribes, as well as Peter Belguard, of the Fort Totten Sioux.

I would also like to enter into testimony a special study to the State of North Dakota to evaluate all reasonable alternatives for connecting the McClusky and New Rockford Canals.

[The statement and information follow:]

Statement of Gov. Edward T. Schafer

Mr. Chairman and members of the Subcommittee, my name is Ed Schafer and I am the Governor of North Dakota. Thank you for the opportunity to appear today on behalf of the State of North Dakota to urge adequate funding for the Garrison Diversion Project for fiscal year 1994.

In my first few months as Governor of our great State, it has been a frustration and a pleasure to support the Garrison Diversion Project. I recognize the need for proper water development in North Dakota to meet the needs of our citizens, and I know the benefits that could be realized by distributing Missouri River water to our people. But is frustrating because I am the ninth Governor since 1944 when the project was first authorized, to ask Congress to move the project forward.

In 1986, the project was reformulated by Congress and Garrison Diversion today is nothing like the project that was first authorized nearly 50 years ago, and was reauthorized nearly 30 years ago. Today the project is designed to meet the contemporary water needs of North Dakota, and is one of the most environmentally sound projects in the country. Not only is the project being fully mitigated, but its enhancement features for wildlife habitat go far beyond the original scope of the project. The project's municipal, rural and industrial water supply component also is an innovative approach to providing for human needs.

I have seen how water development in other parts of the country has resulted in economic development. In Greeley, Colorado, when water was made available to the Eastman Kodak Company the result was a film manufacturing plant that resulted in hundreds of jobs. I believe the same can, and will, happen in North Dakota. If we can get clean safe drinking water to our people, industry and jobs will follow. Agriculture is an economic cornerstone and it will benefit from water development. Water for specialty crops, water for forage crops, and water for value-added processing all contribute to an enhanced agriculture. All of this will mean vital rural economic development.

Many of our communities are experiencing difficulties in providing safe drinking water for their people. Seven communities received notices of violation from the US Environmental Protection Agency stating that the communities could be subject to a fine of up to $25,000 per day if they do not provide safe drinking water to the people they serve. These communities range in size from 128 to 1,019 people, and not one of these communities can afford the potential fine. The municipal, rural and industrial water supply component of the project is the only way we can address these water supply needs. In addition to these seven communities, there are another 93 cities that have water supply problems. Similar problems exist on our Indian Reservations and they, too, must receive adequate funding under the Indian municipal, rural and industrial authority in the project.

In 1994, we must move forward to provide treated water to eastern North Dakota, especially to Devils Lake. A more than $30 million-a-year recreation industry is endangered at Devils Lake if we are not able to stabilize the lake. Also, the Fort Totten Sioux culture suffers because the viability of Devils Lake is threatened. We must initiate the next step in project development, an Environmental Impact Statement, to allow us to complete the connecting link between the McClusky Canal and New Rockford Canal to provide treated water to the east.

Further work at the Oakes Test Area and the Turtle Lake Demonstration Area will help to show that agricultural interests and wildlife interests can be addressed in a mutually beneficial water development project. What we are doing at these two locations has merit for consideration for projects across the nation.

Today we are asking for an appropriation of $41.9 million for fiscal year 1994. Our need is certainly much greater, but we realize the difficult budget situation facing our nation. Although we do not know what the President's budget will include for the Garrison Diversion Project, we are hopeful it will be $41.9 million.

We face similar budget problems in North Dakota, but water development is one area that will help our future economy. Water development means jobs, both now during project development, and in the future as our cities and rural areas have clean safe water available to them. Water development in North Dakota is economic development, and we all must work toward that goal.

Mr. Chairman, North Dakotans are committed to the Garrison Diversion Project. It is one of the most environmentally sound projects in the nation, and even though the project is not what it once was, it is still the most important water project in our state. I thank your committee for past support for the Garrison Diversion Project, and it is my hope that you will continue to do so for fiscal year 1994.

STATEMENT OF PETER BELGARDE, JR., CHAIRMAN, DEVILS LAKE SIOUX TRIBE

MR. CHAIRMAN AND DISTINGUISHED COMMITTEE MEMBERS:

MY NAME IS PETER BELGARDE, TRIBAL CHAIRMAN OF THE DEVILS LAKE SIOUX TRIBAL INDIAN RESERVATION OF NORTH DAKOTA. I AM HONORED AND APPRECIATE THIS OPPORTUNITY TO PRESENT THIS TESTIMONY ON BEHALF OF MY TRIBE.

IN THE 1950'S, CONGRESS DECIDED TO TAKE AND FLOOD OUR HOMELANDS, REMOVING OUR PEOPLE BY FORCE. MANY PROMISES WERE MADE BY THE U.S. GOVERNMENT TO OUR PEOPLE. TO THIS DAY, OUR PEOPLE ARE STILL BEGGING THE U.S. GOVERNMENT TO FULFILL ONE PROMISE, AND THAT IS THE COMPLETION OF THE GARRISON REFORMULATION ACT OF 1986, WHICH INCLUDES PROVIDING GOOD WATER TO INDIAN PEOPLE.

THE BUREAU OF RECLAMATION, AGENTS OF THE U.S. DEPARTMENT OF THE INTERIOR, CONDUCTED PRELIMINARY NEEDS ASSESSMENT OF THE THREE INDIAN TRIBES INCLUDED IN THE GARRISON ACT OF 1986. THE TRIBES ARE IN AGREEMENT WITH THE U.S. GOVERNMENT NEEDS ASSESSMENT OF $130 MILLION TO COMPLETE THE THREE TRIBE'S URGENTLY NEEDED WATER SUPPLY LINES TO THEIR HOMES.

LAST YEAR, I REQUESTED YOUR APPROVAL TO AUTHORIZE AND FUND $650,000 FROM THE BUREAU OF RECLAMATION "GENERAL INVESTIGATIONS" FUNDS, TO COMPLETE THE NEEDED FEASIBILITY STUDIES OF THE THREE NORTH DAKOTA INDIAN TRIBES. THE BUREAU OF RECLAMATION HAS AGREED TO CONDUCT THE NEEDS STUDIES. ONCE AGAIN I WILL SUBMIT MY REQUEST.

OUR TRIBE SUPPORTS THE NORTH DAKOTA STATE-TRIBAL 1994 GARRISON DIVERSION UNIT REFORMULATION ACT OF 1986, FISCAL YEAR FUNDING REQUEST OF $41,9 MILLION.

THE DEVILS LAKE SIOUX TRIBE RESPECTFULLY REQUESTS YOUR FAVORABLE SUPPORT AND APPROVAL TO CONTINUE FUNDING THE NEEDED GARRISON DIVERSIONS ACT,AND FOR FY-1994 FUNDING REQUEST IN THE AMOUNT OF $1,9 MILLION OF WHICH $3.7 MILLION WILL BE ALLOCATED TO THE THREE INDIAN TRIBES OF NORTH DAKOTA TO CONTINUE OUR MR & I WATER NEEDS. THANK YOU.

STATEMENT OF THREE AFFILIATED TRIBES, FORT BERTHOLD INDIAN RESERVATION

The Three Affiliated Tribes submits this written testimony to support the state-Tribal proposal for the Fiscal Year 1994 budget for the Garrison Diversion Unit. Congress reformulated this project in Public Law 99-294, to fulfill the federal government's promise of assistance with water development, for the improvement of public health, environmental and economic needs of the Three Affiliated Tribes. It is understood that the authorized Indian projects in the Garrison Act was only to partially compensate the Indian tribes for the adverse social and economic impacts of the Pick-Sloan program. For the completion of these water projects under the Indian Municipal, Rural and Water Supply Project for the three reservations, we are asking that Congress provide $41.9 million for Garrison in FY1994 of which $3.7 million will be set aside for the Indian MR&I indexing.

The plans are for the improvements to the water systems at the four reservation communities: White Shield, Four Bears, Mandaree and Twin Buttes areas, with the final construction of the entire projects by 1994. The design of all four projects were completed and the lake intakes for White Shield and Four Bears were fully contructed by the Summer of 1991. The Water Treatment Plants will be constructed in 1993 and finally the distribution lines are planned to be completed by 1994.

Further, the Three Affiliated Tribes are benefiting from active participation in the development of the MR&I water supply system. The tribal oversight functions and employment in the construction are economically beneficial. However, more importantly the availability of a water supply that will meet the high water quality standards and be dependable to meet the required limits of public need are the critical advantages.

Based on the foregoing, the Three Affiliated Tribes respectfully request your favorable consideration of our request that $41.9 million by appropriated in FY1994 for the Garrison Diversion Unit, $3.7 million of which will be allocated to complete the Indian MR&I Water Supply Projects.

Thank you for your kind attention and I extend my appreciation to the committee for the assistance that has been extended to the Three Affiliated Tribes.

A SPECIAL STUDY BY THE STATE OF NORTH DAKOTA TO EVALUATE ALL REASONABLE ALTERNATIVES FOR CONNECTING THE MCCLUSKY AND NEW ROCKFORD CANALS

EXECUTIVE SUMMARY

Background

On October 1, 1992, the Garrison Diversion Conservancy District initiated a special study to evaluate all reasonable alternatives for connecting the McClusky and New Rockford Canals and to evaluate the capability of the alternatives for delivering Missouri River water to Devils Lake.

The current gap between the two canals means that North Dakota cannot move Missouri River water to the Red River Basin to meet MR&I water supply needs, to the James River Basin to meet project irrigation and refuge water requirements, or to the Devils Lake Basin to stabilize the level of Devils Lake.

Continued declines in Devils Lake water levels pose a very serious threat to an important natural resource. Of great importance to the local economy, a nationally recognized fishery could be destroyed if levels continue to decline. Stabilizing the lake at a level which precludes fish kill will require the importation of water from the Missouri River to supplement runoff from the Devils Lake watershed.

A team of state and private sector water resource specialists with expertise in comprehensive planning, wildlife management, the biological sciences, engineering, economics, cultural resources, and water quality was assembled to undertake this study. State agencies providing expertise included the State Water Commission, State Game and Fish Department, and the State Department of Health and Consolidated Laboratories. Representatives of each of the aforementioned agencies served as an oversight management group.

The services of a private consultant were also employed.

PURPOSE

The team was directed to identify a preferred means of providing a linkage between the two canals based on commonly accepted evaluation procedures and to prepare a report of its findings. Following acceptance by the management group, the full report was furnished to the U.S. Bureau of Reclamation for consideration in its ongoing Sykeston Canal Alternative Study.

THE ALTERNATIVES

A total of ten alternatives were reviewed or evaluated, all of which are capable of supplying the water needed to stabilize Devils Lake and to meet other project and wildlife needs. Alternatives included the following reservoirs, pipelines, and canals:

(1) *Lonetree Reservoir.*—The Lonetree Reservoir was the cornerstone of the 1.2-million acre irrigation project included in the 1944 Pick-Sloan Plan and an essential component in the diversion of Missouri River water to the Souris and Red River Basins. Lonetree Reservoir remains an authorized feature of the Garrison Diversion Unit Project, but if built as originally envisioned, the storage capacity would exceed the needs of the down-sized, authorized project. It is included in this report because it remains an authorized feature (Garrison Diversion Reformulation Act [PL 99–294, 1986]) and because it serves as a basis for comparison with other alternatives. Each of the following nine alternatives can serve as a functional replacement for the Lonetree Reservoir.

(2) *Mid Dakota Reservoir (1992).*—This alternative is a downsized version of the Lonetree Reservoir. It would meet the needs as specified in the 1986 Garrison Reformulation Act. The surface area at operating level (1619.0 msl) would be 7,158 acres.

(3) *Mid Dakota Reservoir (Revised).*—This alternative differs in several ways from alternative 2. Under this alternative, the outlet has been relocated back to a Hudson Bay alignment, Germantown Dike has been moved approximately three miles downstream, and the Sheyenne Diversion Canal has been extended around the Sheyenne Lake National Wildlife Refuge. The surface area at operating level (1619.0) would be 5,816 acres.

(4) *Pumping Pools.*—This alternative is a reservoir alternative but a conceptual variation of the northern route of the Sykeston Canal. Water from the McClusky Canal would be delivered through the Sheyenne Diversion Canal into Coal Mine Lake and back into the Sheyenne River where a series of three downstream storage pools would be constructed. A pumping plant at the farthest downstream pool would be installed to lift waters 20 to 45 feet into the New Rockford Canal. The surface area of the storage pools at operating level (1600.0 msl) would be 2,880 acres.

(5) *Sykeston Canal—Northern.*—This 23.8-mile canal begins at the end of the McClusky Canal chute and ends at the New Rockford Canal. Social impacts are

minimized because most of the alignment is located within the Lonetree Wildlife Management Area acquisition boundary.

(6) *Sykeston Canal—Southern.*—Social impacts stemming from this alignment are minimized by following section and property lines as much as possible. Instead of beginning at the outfall of the McClusky Canal chute, this southern route begins at Station 3383+00 in Section 7, T147N, R76W. Its total length is approximately 27 miles.

(7) *Sykeston Canal—Missouri Basin.*—This canal originates near the Burleigh-Sheridan-County line at the McClusky Canal approximately 20 miles upstream of the beginning point of the Southern route. The total length of this canal would be approximately 54 miles, and it is the longest and most expensive of the three canal alternatives.

(8) *Northern Pipeline.*—The Northern Pipeline alternative is a gravity flow only alternative. It utilizes the 182 feet of elevation difference between the inlet on McClusky Canal and the outlet to deliver water. The route follows closely the Sykeston Canal (Northern alignment) until it crosses the divide between the Hudson Bay and Missouri River Basin watersheds, where it terminates in an extension of the New Rockford Canal located in the Missouri River Basin.

(9) *Southern Pipeline.*—The route selected for this alternative is some distance removed from the Sheyenne River. It was selected in order to further reduce the risk of biota transfer as a consequence of pipe leakage. The pipeline would originate at Station 3473+00 on the McClusky Canal in Section 32, T148N, R77W and follow section lines for a distance of 13 miles to a ridge on the Missouri Coteau escarpment. Four different options are available for moving project water beyond the ridge, including pipelines, canals, or pipeline/canal combinations.

(10) *Southern Contour Pipeline.*—This pipeline would begin in Section 7, T147N, R76W on the McClusky Canal. Its routing follows contour lines rather than section lines in order to minimize internal pipe pressures. As is the case for the Southern alignment, four options exist for moving water beyond the Missouri Coteau ridge.

Each alternative is discussed in detail later in this report. In some instances, analyzing primary alternatives involved consideration of sub-alternatives or options within alternatives. These are discussed as well, and insight is provided as to why one was preferable to another.

HISTORICAL BACKGROUND

In December 1984, the Garrison Diversion Unit Commission proposed Sykeston Canal as a functional replacement for the Lonetree Reservoir, contending that Lonetree Reservoir was environmentally unsound and not required for the level of irrigation included in the Commission plan. The State of North Dakota disagreed with the Commission's conclusions.

In January 1985, the Secretary of the Interior released a Secretarial Issue Document containing interpretations of Commission recommendations. With respect to the question of Lonetree Dam versus Sykeston Canal, the Secretary took the position that the Bureau of Reclamation should ". . . execute contracts to mothball construction at the Lonetree site and complete land acquisition, begin preconstruction activities on Sykeston, and defer study of the demonstration of need for Lonetree."

The Garrison Diversion Reformulation Act, passed in May 1986, adopted the Commission's recommendations and authorized the Sykeston Canal as a functional replacement for Lonetree. Provision was made to continue authorization for Lonetree Reservoir, but conditions were placed on proceeding with the reservoir alternative.

During 1987, the Bureau of Reclamation completed a report containing preliminary cost estimates and an operating plan for Mid Dakota Reservoir.

A preliminary report on Sykeston Canal Project Evaluation and Risk Assessment was published by the Bureau of Reclamation in March 1989. Canada responded that the risk assessment did not adequately address many Canadian concerns regarding biota transfer. Subsequent to the expression of Canadian concern, a Joint Technical Committee of the International Joint Commission formed biology and engineering study groups to further consider Canadian concerns and to report back to the Joint Technical Committee. In late 1990, a Joint Canadian/United States consultative group accepted recommendations from the Joint Technical Committee regarding the biota issue. The Technical Committee Report documents that three connections between the two canals were potentially acceptable from a technical standpoint, but that additional public review would be necessary.

The federal fiscal year 1993 Appropriations Bill, passed in October 1992, directed Reclamation to move forward with the study of Sykeston Canal alignments. This study is to be completed March 31, 1994.

ALTERNATIVE SELECTION PROCESS

Selection of a preferred alternative was based on consideration of the following criteria:

- Compliance with the intent and limitations contained within the 1986 Garrison Diversion Reformulation Act.
- Compliance with all mitigation requirements as established by the current Garrison Diversion Unit Project authorization.
- Compliance with provisions of the 1909 Boundary Waters Treaty, which specify that waters are not to be polluted on either side of the border to the injury of health or property on the other side.
- Minimization of social impacts.
- Identification of the need for further investigation of the impacts to archaeological and historic sites.
- The capability to provide the water supply needed to stabilize the level of Devils Lake.
- The capability to meet the water supply demands of all authorized features.
- Economic and fiscal feasibility for construction, operation, and maintenance by either the federal government or the state of North Dakota.

PREFERRED ALTERNATIVE

Based on consideration of the above criteria, the Mid Dakota (Revised) alternative was selected as preferable to all other alternatives.

The Mid Dakota Reservoir (Revised) alternative meets established criteria and has significant advantages over other alternatives.

- It fully complies with the Garrison Reformulation Act, it possesses the capacity to serve all authorized project features, and is capable of delivering water for the stabilization of Devils Lake.
- Environmental impacts associated with constructing the project can be mitigated. A total of 1,765 acres of wetlands will be impacted by the Mid Dakota (Revised) alternative, of which 567 acres are part of the Sheyenne Lake National Wildlife Refuge. All acres impacted will require mitigation.
- Enhancement of waterfowl and wetland habitat through the delivery of project waters is a significant advantage not available with a canal or pipeline alternative.
- The risk of interbasin transfer of biota is considered to be within acceptable limits.
- The capital cost of this alternative is $10.5 to $48.3 million less than the two least costly canal alternatives, and $144.2 million less than the least costly pipeline alternative.
- The operation and maintenance cost burden on project water users would be about one-third that of the canal alternatives, and less than all but one of the pipeline alternatives.
- Reservoir options provide the most reliable method of supplying water to all authorized project features.
- The number of archaeological or historic sites anticipated to be potentially impacted by the Mid Dakota (Revised) alternative is one of the lowest of all alternatives reviewed.
- Fewer landowner impacts result from implementation of the preferred alternative than from either the Southern Pipeline or the Sykeston Canal-Southern alignment.
- With respect to costs to water users, the preferred alternative is the least costly of all those evaluated.
- The potential savings accruing from development of the Mid Dakota (Revised) alternative could be used for additional wetland and waterfowl habitat enhancements, expansion of funding for the North Dakota Wetlands Trust, or the completion of other project features.
- The preferred alternative can continue to provide a reliable reserve supply to irrigators in the Harvey and New Rockford areas should McClusky Canal failure occur; it has an enhanced ability to supply water during the winter months; it can supply water to wetlands and waterfowl habitat in the upper Sheyenne River; and it can deliver water sooner than any other alternative because of the construction time needed to implement other alternatives.

STATE POSITION STATEMENT

It is the position of the state of North Dakota that all reasonable alternatives should be evaluated in the Bureau of Reclamation's Sykeston Canal Alternatives

Study and that this special study report is an objective appraisal that demonstrates that a reservoir alternative, not a canal alternative, represents the preferred method of bridging the gap between the two canals. An objective appraisal by any other organization would likely conclude the same.

ACKNOWLEDGEMENTS

The following individuals served as members of the Special Study Management Committee, the Special Study Team, or otherwise participated in the preparation of this report:

Study Management Committee.—Warren Jamison, Manager, Garrison Diversion Conservancy District; Francis Schwindt, Chief, Environmental Health Section, North Dakota Department of Health and Consolidated Laboratories; Lloyd Jones, Commissioner, North Dakota Game and Fish Department; and David A. Sprynczynatyk, North Dakota State Engineer.

Special study team.—Jim Lennington, North Dakota State Water Commission; Linda Weispfenning, North Dakota State Water Commission; Scott Peterson, North Dakota Game and Fish Department; Gene Krenz, North Dakota State Water Commission; Preston Schutt, North Dakota State Water Commission; Larry Knudtson, North Dakota State Water Commission; Michael Gunsch, American Engineering, Bismarck, ND; and Michael Sauer, North Dakota Department of Health and Consolidated Laboratories.

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Support staff.—Melissa K. Miller, Editorial Consultant; Dawn Petersen, Secretary, North Dakota State Water Commission; Kurt Kunz, Engineering Technician, North Dakota State Water Commission; Lee Klapprodt, Planner, North Dakota State Water Commission; and Brenda Bosworth, Graphic Artist, North Dakota State Water Commission.

STATEMENT OF ROBERT STRAND, CHAIRMAN, GARRISON DIVERSION CONSERVANCY DISTRICT

Governor SCHAFER. Mr. Chairman, North Dakotans are committed to the Garrison diversion project. It is one of the most environmentally sound water projects in this Nation.

I thank your committee for its past support and it is my hope that you will continue on for the fiscal year 1994.

Senator JOHNSTON. Thank you very much, Governor.

Senator DORGAN. Mr. Chairman, Mr. Strand, chairman of the Garrison Diversion Conservancy District, is also with us to testify today.

Mr. STRAND. Mr. Chairman, my name is Robert Strand. I am presently the chairman of the Garrison Diversion Conservancy District board of directors.

We appreciate the support the Appropriations Committee has given to the Garrison diversion unit over the years. And we are sensitive to the task that you face today in attempting to manage Federal spending, while trying to provide for economic growth in a responsible manner.

Nevertheless, North Dakota needs a project to develop our State's limited water resources prudently and a project that will provide long-term economic growth. That project is the Garrison diversion unit.

FUNDING REQUEST

Today, we are here to testify in support of a $41.9 million appropriations for the project. In reality, the need is far greater. We are specifically requesting funding to start the environmental impact statement on the principal supply work and analyze the associated environmental impacts.

We see no reason why a draft environmental impact statement, including a preferred alternative means of connecting the McClusky and the Rockford Canals, could not be identified and published in 1995.

DEVIL'S LAKE STUDY

In addition, a Corps of Engineer study of a basinwide plan for stabilizing Devil's Lake and saving this important recreation industry should also be completed in time for consideration in a comprehensive Federal record of decision by the end of the year, 1994.

At the same time, we are requesting funds to carry on with the excellent work done by an interdisciplinary task force in the Turtle Lakes area, adjacent to the existing McClusky Canal, and for studies in the Oakes test area.

The Oakes studies already show that wetlands can be managed conjunctively with irrigation. The wetlands provide cleanup as well as environmental productivity and irrigation can be managed in a closed system with discharges all within and below allowable water quality limits.

Funding is also needed to proceed with a more detailed examination of a plan for initial development in the Turtle Lakes area. We appreciate your support and this opportunity to testify.

A complete copy of my testimony is submitted for the record. Thank you.

Senator JOHNSTON. Thank you very much.

[The statement follows:]

STATEMENT OF ROBERT STRAND

Mr. Chairman and members of the Subcommittee, my name is Robert Strand, Chairman of the Garrison Diversion Conservancy District in North Dakota. I appreciate the opportunity to file this statement in support of appropriations for the Garrison Diversion Project. I will summarize this statement in my verbal testimony before the Committee.

We appreciate the support for the Garrison Diversion Unit that the Appropriations Committee has provided over the years. We are particularly sensitive to the difficulty of attempting to manage federal spending and yet provide for economic growth in a responsible way.

Economic opportunities are extremely limited in the absence of reliable, quality water supply. North Dakota has been working with the federal government from the beginning of statehood to rectify a serious water distribution problem within the state. As has been done so successfully in many other states, North Dakota seeks a program to manage the state's water prudently and to make those waters available to the areas of need so that our economic engines can become productive. That program is the Garrison Diversion Project. No other program is more vital to the future economic opportunities for North Dakota than the Garrison Diversion Project.

Since 1944, the project has been revised, reduced, and stalled while programs in more populous states have forged ahead. The rich get richer and the poor get poorer, but we have continued to keep the faith in our federal government's promises to develop the Garrison Diversion Project in return for the construction of the main stem reservoirs and the delivery of benefits to downstream regions of the Missouri Basin.

Today we are testifying in support of a $41.9 million appropriation. The actual capability and need is far greater. In particular, I would like to point out that we are only asking for $2 million for the operation and maintenance of the supply works. In actuality, the supply works has design deficiencies and preventive maintenance needs of nearly $30 million by itself. Major slides remain unrepaired, beach belting to prevent future problems is needed, and expensive slide repairs continue to be unfunded at considerable risk.

In recognition of your need to contain spending, we have chosen to not ask for funding to bring canal up to standard, but instead chosen to focus on the most vital source of funding for the project in this year's budget. I refer to funding in support of the principal supply works and the Turtle Lake Irrigation Plan.

The Reformulation Act of 1986 provides for the development of a new Garrison Diversion Unit which allows consideration of plans to stabilize Devils Lake and to deliver Missouri River water to the Sheyenne and James River Basins. The Bureau of Reclamation is currently studying two alternative means of connecting the McClusky and New Rockford Canals. These two alternatives consist of two alignments of the Sykeston Canal. We have no quarrel with these studies and have supported them in the public scoping meetings sponsored by the Bureau of Reclamation.

What we believe to be logical and appropriate is to provide the Secretary of Interior with the full array of reasonable alternatives and their associated environmental impacts at the earliest practicable time. We, therefore, are asking for funding for the Bureau of Reclamation to begin a programmatic Environmental Impact Statement in fiscal year 1994. The scope of the EIS would include those items ripe for decision, including the best means of completing the link between the canals, the best plan for stabilizing Devils Lake, and the resolution of issues pending in the James River delivery systems.

To help move the process forward, the State and the Conservancy District have conducted their own study of eight additional ways to connect the McClusky and New Rockford Canals. We are not presupposing that the results of the Sykeston Canal alternatives under study by the Bureau of Reclamation, but simply wish to examine a wider range of alternatives to assure that the decision makers are fully informed and, thus, able to pick the best option.

The study has been left in a draft form intentionally so that valuable evaluation and input can be accommodated in future revisions and to recognize that the important input of the Bureau of Reclamation and the Fish and Wildlife Service is lacking. The draft study identifies a revision to the previously favored State alternative which greatly reduces the environmental impacts, provides for total mitigation of the remaining impacts, and proposes unique opportunities for environmental enhancement not available under other options. This study has been forwarded to the Bureau of Reclamation and the Secretary of Interior in the hope that it will aid them in their studies and be considered in the Environmental Impact Statement needed before any firm decisions can be made.

We see no reason why a Draft Environmental Impact Statement including a "preferred" alternative means of correcting the two canals could not be identified and published by the end of fiscal year 1994 with the additional funding requested. The designation of a preferred alternative could serve as the basis for consultations with Canada to assure that the plan is in compliance with the requirements of the 1909 Boundary Waters Treaty.

A Corps of Engineers study of a basin-wide plan for stabilizing Devils Lake should also be completed in time for consideration in a comprehensive Record of Decision.

At the same time, we are requesting funds to carry on with the excellent work done by an interdisciplinary task force in the Turtle Lake area adjacent to the existing McClusky Canal. This group has developed a plan to irrigate alfalfa and other nonsurplus crops with an average of 15 inches of water or less annually and to do so in harmony with the wetland and wildlife habitat in the area. The actual theme of this plan is to jointly manage the wetlands for agricultural production during certain times of the year and for wildlife production in the others, thus minimizing the mitigation requirements. This group has a plan for an initial development of between 3,000 and 5,000 acres. Additional funding is needed to allow the Bureau of Reclamation to go forward with a more detailed examination of the plan and an environmental analysis of the impacts associated with the proposal.

The idea that irrigated agriculture is some sort of sin against nature must not be blindly applied to all projects. In fact, many projects' benefits have exceeded the planners expectations in terms of agriculture and environmental productivity. The agricultural water needs in North Dakota are supplemental in nature. The soils are leached by years of unreliable rains that can devastate and severely limit the potential for agricultural diversity; i.e. development of nonsurplus crop regimes. Critical follow-up studies in the Turtle Lake area, along the existing McClusky Canal and in the Oakes Test Area, are of national interest to the industry. The Oakes studies are showing that wetlands can be managed conjunctively with irrigation and both come out winners. The wetlands provide cleanup as well as environmental productivity, and irrigation can be managed in a closed system with discharges all within and below allowable limits. This work is vital to both interests and of tremendous national interest. We urge continued funding of this important work.

These are the critical areas of additional funding needed in order for this project to proceed in accordance with the Reformulation Act, the Boundary Waters Treaty, and the National Environmental Policy Act.

Additional funding sought is for further studies and construction of needed municipal, rural, and industrial water supplies, fish and wildlife facilities primarily associated with the principal refuges, the Wetlands Trust, and a modest amount to complete selected recreation facilities. Indian MR&I funding, made possible by the authorization of indexing provisions for this component, is being also sought.

We appreciate the opportunity to briefly state our case. We remain confident that by working within the terms of the Reformulation Act, the Boundary Waters Treaty, and the National Environmental Policy Act; the Garrison Diversion Project, and with it, North Dakota's long-sought dream of economic opportunity, can be realized. This is not the Garrison that became a symbol for rallying environmental opposition against water projects but a new and improved Garrison that is accepting the challenges of current environmental concerns, and at the same time, providing the opportunity for freedom from the economic constraints that have held back North Dakota for so many years.

STATEMENT OF HON. KENT CONRAD, U.S. SENATOR FROM NORTH DAKOTA

Senator JOHNSTON. Gentlemen, before you leave, my esteemed colleague, Kent Conrad, has come in, and I would like to recognize him for a comment or two on the Garrison diversion project.

Senator CONRAD. Well, thank you, Mr. Chairman.

Let me first say a thank you to the chairman and this subcommittee for your past support, because we are well aware that without the strong and active involvement of the chairman and this subcommittee, the Garrison diversion project might well have died long ago.

So, first of all, we are here to say thank you to you, Mr. Chairman, and thank you to this subcommittee. We deeply appreciate the support you have provided and the understanding you have brought to this long simmering controversy.

The fact is a promise was made to the State of North Dakota. In exchange for that promise, we have what many call and what my junior colleague often calls the permanent flood, some of the best farmland in the State of North Dakota. And now we are here to ask once again that the promise be kept on the Federal Government's side.

This year we are asking for $41.9 million so that we can start to reach closure on those promises that were made. Over one-half of the money that is being requested this year is for MR&I projects.

We have a long way to go in order to complete the funding that was promised just in this area. And these are projects that are of extraordinary importance to the State of North Dakota.

There are many places in the State that have very poor water quality. And I think there is no controversy about the need to provide those areas with quality water. I do not think there is much controversy either about the parts of MR&I projects that go for rural uses, and certainly there is no controversy with respect to the need to improve water quality on the State's Indian reservations.

You have heard here today excellent testimony from our Governor, from the chairman of the conservancy district, and from Senator Dorgan. I hope very much that the subcommittee can see its way clear to support this funding request.

If this funding request does pass, we still are millions of dollars away from getting the final result that Congress anticipated when it authorized the Garrison project.

So, Mr. Chairman, I am just here to say that those who are testifying on behalf of North Dakota here today have the full support of the State with respect to this project. It is something that North Dakota believes it deserves to get completed. It is something that has been a very tough struggle. No one knows that better than the chairman of this subcommittee.

I want to again close by saying thank you, Mr. Chairman, for your support in the past. We ask you to help us again this year. And we tell you we are ready to do whatever is necessary to make the case to our colleagues.

With that, Mr. Chairman, I want to conclude my remarks, and ask that a prepared statement be made part of the record as well.

Senator JOHNSTON. Thank you very much. And thanks to your good comments, Senator Conrad.

I am very well aware of Garrison diversion. I have worked on it as long as most North Dakotans, since I have been on this subcommittee—some 18 years—and was made aware of it on my very first day.

It is a very important project and you can be sure I will continue to give it a high priority. Thank you very much.

[The statement follows:]

STATEMENT OF SENATOR CONRAD

Mr. Chairman, thank you for this opportunity to appear before you today on behalf of the Garrison Diversion Project in North Dakota. This subcommittee, and the full Senate Appropriations Committee, have been staunch supporters of Garrison for many years, and I am deeply grateful for this.

Testifying before you on behalf of the State of North Dakota are Edward Schafer, Governor of North Dakota, and Robert Strand, Chairman of the Garrison Diversion Conservancy District. They will outline in greater detail their request for funding, but I wanted to briefly express my thoughts on the project.

We are requesting $41.9 million for Garrison in fiscal year 1994. I fully understand the budget pressures that the Committee faces this year. However, I urge the Committee to look favorably upon our request for this level of funding. This is money that North Dakota both needs and deserves. It will bring clean water to our communities, protect wildlife and wetlands, and spur economic development in a state that desperately needs it.

Over half of our request this year is for Municipal, Rural, and Industrial (MR&I) water projects. The MR&I program has been one of the major bright spots in the Garrison project over the last six years, but many North Dakota communities are still in serious need of a clean and reliable water supply. Over half of the MR&I money authorized for Garrison has not yet been appropriated, and the state has a long line of projects that are ready to go and awaiting funding. I would like to point out that Garrison MR&I projects all must provide local matching funds to go along with the federal dollars. I would also like to point out that several Indian municipal water projects in the state will remain unfinished until additional funding is provided.

This Subcommittee is well aware of the long history of the Federal government's broken promises to North Dakota on Garrison. The State of North Dakota has worked in good faith to continue to move the project forward. This year, we hope to see the completion of a study of options to connect the McClusky and New Rockford canals. We also hope that the Bureau of Reclamation will begin an environmental impact statement (EIS) concurrently with this study. These actions will move the project closer to completion.

Mr. Chairman, the Garrison Diversion Project is vitally important to the economic future of my state. Under the 1986 Reformulation Act, the project can benefit rural communities, urban centers, Indian tribes, wildlife, and the overall economy of

North Dakota. We have waited a long time to realize the full benefits of Garrison. I hope that you will continue to help us in our struggle to reach that goal.

LOWER MISSISSIPPI VALLEY FLOOD CONTROL PROJECTS

STATEMENT OF GEORGE GRUGETT, EXECUTIVE VICE PRESIDENT, LOWER MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION

Senator JOHNSTON. Next, we are going to go a little bit out of order. The Red River Valley Association is the next group, but since the Lower Mississippi people are in the audience, we will go to the Lower Mississippi Valley Flood Control Association, with George Grugett, executive vice president, who will make the initial introduction.

Mr. GRUGETT. Mr. Chairman, thank you.

I am George Grugett. I am the executive vice president of the Lower Mississippi Valley Flood Control Association. We appreciate very much this opportunity, Mr. Chairman.

We have two speakers today for the sake of time and I would like to introduce both of them now. First, Mr. M.V. Williams, who serves as chairman of our executive committee, and also is a longtime president of the West Tennessee Tributaries Association, headquartered in Friendship, TN.

Our speaker following Mr. Williams will be Mr. Curtis Patterson, from your State of Louisiana. Curtis is also a member of our executive committee. He serves as the director of Public Works and Flood Control within the Louisiana Department of Transportation and Development, with headquarters in Baton Rouge, LA.

PREPARED STATEMENTS FOR THE RECORD

Mr. Chairman, I have also submitted several written statements that we would like to have made part of the record. And, again, thank you, sir.

Senator JOHNSTON. Thank you, Mr. Grugett. We'll incorporate all of those statements in the record.

[The statements follow:]

STATEMENT OF JAMES E. WANAMAKER, CHIEF ENGINEER, BOARD OF MISSISSIPPI LEVEE COMMISSIONERS

Mr. Chairman and members of the committee, I am James E. Wanamaker, Chief Engineer for the Board of Mississippi Levee Commissioners, Greenville, Mississippi, and I have the privilege of presenting this statement on behalf of that Board and the citizens of this Levee District comprising the counties of Bolivar, Issaquena, Sharkey, Washington, and parts of Humphreys and Warren in the Lower Yazoo Basin in Mississippi.

The Lower Mississippi Valley Flood Control Association will present a general statement in support of the appropriation for fiscal year 1993 for the construction, surveys, advanced engineering and the operation and maintenance of the Mississippi River and Tributaries Project. With the need throughout the nation to provide more jobs and continue to stimulate the economy, no project meets these criteria better than the Mississippi River and Tributaries Project. Every item of work is required to return benefits greater than a dollar to our nations economy for each dollar spent. With this in mind, we urge the appropriation be sufficient to allow construction to continue at the maximum capability of the Corps of Engineers. This will not only boost the economy of one of the poorest areas of the nation, but will also provide much needed flood protection to the residents of the Lower Mississippi Valley.

Since the President has not submitted his budget at this time, we are unable to address whether any of these projects might require additional funding to maintain schedules. We would like to take this opportunity to review the projects critical to Mississippi Delta.

The Mississippi River Levees are the backbone of flood control throughout the Lower Mississippi Valley. The Vicksburg District needs to have this work funded at their maximum capabilities. Since this project has a benefit cost ratio of over 31 to 1, it will provide a return to the economy far greater than many other programs being considered.

Following a delay of over 2 years in the construction of the Yazoo Basin Projects while the reformulation process was being undertaken, it is now imperative that funding be sufficient to maximize the construction capabilities on the Upper Steele Bayou Project and Upper Yazoo Project. These two major flood control projects will provide protection to the communities of the Delta that were devastated in 1991 when record stages were recorded on these streams. Two major items that are part of the Upper Steele Bayou Project, which will provide flood protection to the City of Greenville, are scheduled for contract during fiscal year 1994. For those who were flooded twice in 1991, this work can not be completed soon enough.

We would like to insure that two projects are included in the funding for the Yazoo Basin Operation and Maintenance. Severe flooding has occurred along the Big Sunflower River and the Bogue Phalia in 1989, 1990, and 1991 with record stages being set in 1991. Last year, you included funding to implement the design and preparation of a Supplemental Environmental Impact Statement for the Big Sunflower Channel Maintenance Project (including Bogue Phalia, Little Sunflower River, etc.). This work needs to proceed on schedule so that construction can begin in fiscal year 1995. With areas needing major maintenance having been identified, it is imperative that this work proceed at an accelerated pace to restore flood protection to the citizens of the Basin. Until this work is completed, the threat of flooding continues to burden these people throughout the year.

The Tallahatchie and Yalabusha Maintenance Projects were halted for four years waiting for the completion of the Supplemental Environmental Impact Statement. Now that construction has started on these projects, we are requesting that the Corps capabilities be maximized to provide the outlet for discharges from the 4 reservoirs in the headwaters of the Yazoo River. This work will also reduce stages at Marks, Tutwiler and Lambert, MS until the Upper Yazoo Project is completed.

Humphreys County and the City of Belzoni have requested that the old turn bridge at Belzoni be removed from the Yazoo River. The Vicksburg District has determined that this can not be done by the Corps under current authorization. This bridge has become a hazard to navigation and would block traffic completely if it should fall. We would like to request that the Congress include language to direct the Corps of Engineers to remove this bridge at Federal expense.

The reformulation of the Yazoo Backwater Project has been initiated and the Board of Mississippi Levee Commissioners has provided the Corps of Engineers with a letter of intent to cost share this much needed project. We continue to feel that the declaration of the remaining items in this project as separable elements does not adequately take into consideration that it is an integral part of a complex Flood Control Project designed as a part of the Mississippi River and Tributaries Project.

The two Levee Boards whose districts encompass the project area of the Mississippi Delta, Mississippi, Study have provided the Corps of Engineers with letters of intent to sponsor this study. This flood control study is being done at the same time that a water supply study is being initiated by the Soil Conservation Service. The funding for this study needs to be kept on schedule to allow the necessary coordination of information to insure that the recommended project will provide the maximum level of flood protection possible.

Both the Yazoo Backwater Project under current policies and any project resulting from the Mississippi Delta, Mississippi, Study will be subject to cost sharing. As part of the Water Resources Acts of 1990 and 1992 the Congress acknowledged that the criteria being used to determine the "ability to pay" was not working and directed the Secretary of the Army to revise this procedure. The current criteria for determining the ability-to-pay continues to deprive areas throughout the nation, who can not afford to pay for these projects, the protection they have been promised and deserve. It is imperative that the method for determining the ability-to-pay be revised at the earliest possible time to allow the poor areas of the country to afford these much needed projects. After 7 years, it is apparent that this will not be done without specific direction from the Congress.

The wetlands issue continues to concern everyone in the Lower Mississippi Valley if not the nation. We continue to support passage of HR 1330 and S 1463 as a means to fairly address the wetland problem.

The news that the reorganization of the Corps of Engineers has been put on hold has averted what could have developed into a crisis situation for sponsors. We hope that this is a dead issue until such time that the Mississippi River and Tributaries Project is completed. We are grateful for the consideration given to us by the Committee and appreciate the opportunity to present our requests to you at this time.

STATEMENT OF THE PONTCHARTRAIN LEVEE DISTRICT, LA

The levee district

The Pontchartrain Levee District extends downstream from the City of Baton Rouge a distance of 115 river miles, includes the east (left descending) bank of the Mississippi River, and is comprised of portions of East Baton Rouge, Iberville, Ascension, St. James, St. John the Baptist and St. Charles Parishes. The Mississippi River east bank levee is continuous throughout the Levee District, including the Bonnet Carre Floodway.

Extensive development of major industries has taken place in the Pontchartrain Levee District. Along with industrial growth, our Levee District has witnessed a dramatic increase in residential and urban expansions. Substantial portions of the Levee District area are used for agriculture. Three (3) nationally ranked deep-water ports are companions to the Pontchartrain Levee District—the Baton Rouge Port, South Louisiana Port, and New Orleans Port.

The District contains numerous pipeline systems which deliver goods to nationwide distribution points. Interstate Highways 10 and 55 and a number of major U.S. Highways traverse the Levee District, along with major railroads. The Mississippi River 55-foot deep ship channel is the western Levee District boundary. Three (3) major bridges, each with four (4) traffic lanes, cross the river in our District.

All these features and many other improvements along with more than one million residents are protected by the Mississippi River and Tributaries Flood Control Project in this one (1) Levee District. Only through continuous, effective flood control improvements and maintenance can this area and the lower river valley meet requirements to serve national needs for industry, employment, deep-water navigation, highway and rail transportation, major pipelines, residential, agriculture and related activities.

Comments

The Pontchartrain Levee District is not new in directing its support to MR&T flood control appropriations and it is not done passively. Since the beginning of the MR&T Project, the Pontchartrain Levee District has served as a local sponsor to provide right-of-ways and maintenance of the levees. The importance of flood control has not diminished over the years, but rather has been established as an every day requirement. About eighty-five percent (85 percent) of Louisiana's citizens now live behind levees along with metropolitan areas, major industry, agricultural products and vast natural resources—they are all dependent on flood control for continued existence and conduct of business. This statement is submitted to urge and justify adequate funding for the project for fiscal year 1994. Appearing before the Subcommittee today are Commissioner Henry Baptiste and Commissioner Izeal Morris on behalf of the entire Board of Commissioners.

At this time we come before the Appropriations Committee with a disadvantage because the President's Budget for fiscal year 1994 has not yet been released. Therefore, recommended appropriation amounts are not contained in this statement. However, the Pontchartrain Levee District desires to extend its full cooperation in support of budget requirements as may be concluded by President Clinton. In that regard, the Pontchartrain Levee District strongly believes that MR&T appropriations should be no less than amounts in fiscal year 1993. Smaller amounts would cause an increase in unemployment, have negative effects on the seven (7) states in the Lower River Valley and surrounding regions, and be a severe setback to the project that we have worked continuously for since 1928. The following recommendations point out the necessity and justification of continuing project work at acceptable levels without identifying specific dollar amounts.

Recommendations

Mississippi River levees.—In the Pontchartrain Levee District several reaches of main line levee must be enlarged and slope paved to advance from the current status of partial flood protection. Priority should be given to Darrow-Central, Baton Rouge Front and LaPlace-Reserve levees. Only one (1) of four (4) levee reaches has been repaired where the 1973 flood severely damaged the levee, washing away a substantial portion. These items mentioned are essential elements for early construction. Future levee enlargements and slope paving are required in five (5) parishes of the Levee District.

Channel improvements.—Main line levees must be protected from caving banks throughout this lower river reach where extremely narrow battures are the last line of defense against levee crevasses and failures. If caving banks are not stopped the only answer is "setback". Simply stated there is no room remaining for levee setbacks in the Pontchartrain Levee District. Revetment construction must be provided in adequate annual increments that will provide for protection from land losses with vast relocations and advancement toward completion of planned work.

Lake Pontchartrain and vicinity hurricane protection project.—The Pontchartrain Levee District is the local assuring agency for that portion of the project in St. Charles Parish. Only 3.4 miles of levee is currently under construction of the first lift, whereas this segment is overall ten (10) miles in length and also has five (5) major drainage structures. If the New Orleans Metro and St. Charles Parish areas are to achieve protection from hurricane flooding, a total of about fifty million dollars ($50,000,000) should be provided over the next several to ten (10) years and smaller amounts thereafter.

Conclusion

The Board of commissioners, Pontchartrain Levee District, compliments the Subcommittee on Energy and Water Development for the keen understanding of real needs for the MR&T Flood Control Project and the efficient, alert actions taken to appropriate funds for its many complex requirements. We endorse recommendations presented by the Association of Levee Boards of Louisiana, Louisiana Department of Transportation and Development, Lower Mississippi Valley Flood Control Association and Red River Valley Association.

STATEMENT OF THE BOARD OF LEVEE COMMISSIONERS FOR THE YAZOO-MISSISSIPPI DELTA

Mr. Chairman and members of the subcommittee, this statement is presented by Kenneth L. Weiland, CEO, Chief Engineer for the Board of Levee Commissioners for the Yazoo-Mississippi Delta. It is submitted on behalf of that Levee Board and the citizens of the Yazoo Basin. We support the overall statement of the Lower Mississippi Valley Flood Control Association concerning the appropriation of funds during fiscal year 1994 to the Mississippi River and Tributaries Project. The Yazoo Basin is an important part of the MR&T Project, and this statement will particularly address needs within the Yazoo Basin Project.

The Yazoo Basin contains nearly 13,000 square miles roughly divided between the hilly uplands to the east and flat alluvial Delta to the west. It is shaped like an inverted cone so that the drainage moves generally southwesterly to enter the Mississippi River just upstream of Vicksburg, Mississippi. Most of the hill runoff and a portion of the east Delta runoff enter the Yazoo-Tallahatchie-Coldwater Rivers system. Runoff from the western portion of the Delta enters the Big Sunflower River-Steele Bayou system. Storm runoff passing through these systems adversely affects the citizens of numerous cities, towns, and rural communities. When Yazoo Basin flood conditions coincide with highwaters on the Mississippi River, the damages to property and the local economy are greatly increased.

To deal with the complex problems of the Yazoo Basin, the Congress authorized the Yazoo Basin Project as part of the overall Mississippi River and Tributaries Project. The four features of the Yazoo Basin plan are:

—The Mainline Levee System—This is the continuous levee along the East Bank of the Mississippi River to prevent highwater overflows from spilling into the flat Delta.

—The Upper Yazoo Projects—A system of reservoirs, levees, and channel improvement designed to regulate the runoff from hill lands and other tributaries of the Yazoo River and to carry flood waters safely to the Mississippi River.

—The Big Sunflower River and Steele Bayou Project—A system of channel improvements to safely remove storm water runoff from the western major portion of the Delta to the Mississippi River.

—The Yazoo Backwater Project—A system of levees, outlet structures, and pumps intended to protect the south Delta from backwaters or lack of drainage due to high stages of the Mississippi River.

The comprehensive plan for the Yazoo Basin was authorized by Act of Congress in 1936 and in subsequent Acts. Because it has a very favorable benefit to cost ratio, has a beneficial effect to the local and national economy, and meets so many national goals and aspirations; the Congress has been consistently generous in funding construction of the work. Wisely, large amounts of available appropriations have been applied to the portions of the project which yield the largest and quickest benefits. For example, the four hillside reservoirs were constructed first, and they have greatly increased the interval between disastrous floods. Still, the full design benefits cannot be realized until other portions of the project are completed downstream sometime around 2013 AD.

You will recall that Governor Fordice of Mississippi appeared before you last year to describe the terrible conditions he found as a result of the disastrous effects of the floods of 1989, 1990, and 1991. Many communities in the Mississippi Delta have not yet recovered from these repetitious blows. The terrible toll of the flooding is only partly represented by the 1,364,000 acres that were inundated one or more times, or by the financial losses of $262,633,000 that were counted by federal authorities for those three flood years. The rest of that toll is represented by the hardships suffered by the citizens of the Delta. Hundreds of homes were flooded several times in that three year period. Many people, including children and the infirm, were displaced from their homes; were unable to go to work, to school, and to medical care; or had to travel through flood waters at considerable personal risk. In many cases, the most grievous burden fell upon those people least able physically and financially to bear it.

The average citizen of the Mississippi is anxiously awaiting a resumption of a reasonable and orderly program of construction of vitally needed projects in the Steele Bayou area below Greenville and along the Upper Yazoo Projects between Greenwood and Marks, Mississippi. They didn't always understand, or agree with, the need for reformulating these projects, yet, they patiently waited and endured. Now that the reformulation of Steele Bayou is complete and the reformulation of the Upper Yazoo Projects is nearly so, the citizens are counting on these projects to be constructed as rapidly as reasonably possible.

We are encouraged that President Clinton has indicated support for public works which will restore or improve the infrastructure, which will provide jobs, and which will benefit local and national economy. We believe that the projects we have described meet the criterion set forth by the President and that his Budget will contain adequate funding for the Upper Yazoo Projects, the Steele Bayou Project, the Tallahatchie and Yalobusha Rivers Maintenance, the Big Sunflower/ Boque Phalia Maintenance, and the Yazoo Backwater Pumps.

We realize that the Congress faces enormous problems and pressures to meet the nation's needs with the limited resources available, and, we respectfully request the privilege of supplementing this statement when the President's Budget is released. At that time, we may be able to offer additional information concerning the specific items of work included in the Budget.

Thank you for your consistent understanding and support as you allocate available funds to extremely important public works. We, and the people we represent, are grateful for your wisdom and foresight in recognizing the true value of these investments to our area and the entire nation.

STATEMENT OF BILLY J. FELTY, CHIEF ENGINEER, ST. FRANCIS LEVEE DISTRICT, ARKANSAS

Mr. Chairman and distinguished members of the committee, I am writing to you on behalf of the Sny Island Levee Drainage District, located twelve miles southeast of Quincy, Illinois and 70 miles north of St. Louis, Mo., between river mile 267 and 316. The District protects approximately 125,000 acres of fertile, river bottom farm ground that substantially contributes to our national wealth by producing an abundance of farm crops and related products.

The Sny District maintains 54 miles of main stem Mississippi River levee banks, which are currently being drastically eroded by the Mississippi River wave wash, silting, and spreading to a dangerously inadequate capacity, particularly in areas where the Mississippi River dikes are located. 15 miles of the District's main stem Mississippi River levee are in critical condition, and 10 miles serious condition. That's 46 percent of the District's main stem river levee. In the 15 miles of critical levee, the wave wash has gone beyond the toe of the levee and is eroding the Sny's Mississippi River levee itself. The 10 miles of Sny Mississippi River levee that are in serious condition have a small amount of toe remaining that is quickly deteriorating, and continuously being washed away by the Mississippi River wave wash and current.

Another contributing factor to the Sny main stem levee erosion is the dammed Mississippi River levee pools #21, #22, and #24 being maintained at a nine-foot navigational channel level. The dammed Mississippi River pools cause seepage in the Sny's District and thus require extra pumping by the Sny's eight pumps located at three different sites.

The main stem Mississippi River levee was improved in the early 1960's to a 50-year flood frequency level; but, to adequately protect the land and property in the Sny District, the Commissioners feel that the main stem levees should be raised and strengthened to 200–500 year flood frequency levees, with rip-rap along the critical and serious levee bank areas. One of the main reasons that the District's levee height is no longer adequate is due to continual siltation in the River which decreases its capacity. During times of high flows and run-off the Sny's current combined pumping capacity of 1,136,000 gallons per minute would not be adequate to prevent flooding. If the Sny were to experience high water levels along its Mississippi River levees the critical areas of the levee would not hold, and would allow a levee breach. If a breach of levee occurred, not only would many acres of farmland, various businesses, small towns and homes be endangered by flood waters, but the new 4-lane highway with trumpet and diamond interchanges and the Mississippi River bridge to Missouri (to be constructed in the near future, at an estimated cost of $12 million), would also be threatened. It is inconceivable that the State and Federal governments would spend millions of dollars on a 4-lane transportation system which transverses the District's flood plain, and then fail to help the local District protect it from flooding. Major damage to all of these structures could occur as early as this spring and "time is of the essence" in strengthening and improving the levees to prevent a breach.

In order to achieve these adequate levels of flood control protection, the Sny Island Levee Drainage District will require Federal financial assistance for the U. S. Army Corps of Engineers to raise and strengthen the main stem Mississippi River levee.

STATEMENT OF SNY ISLAND LEVEE DRAINAGE DISTRICT

Mr. Chairman and members of the committee, my name is Billy J. Felty. I am Chief Engineer of the St. Francis Levee District of Arkansas. I live in West Memphis, Arkansas which is located in the Delta of Eastern Arkansas. I am filing a statement in behalf of the Levee and Drainage Districts within the St. Francis Basin which provides flood control and drainage to 3,500 square miles of Delta land, an area beginning at Commerce, Missouri at the foot of Sikeston Ridge on the North, to the mouth of the St. Francis River just north of Helena, Arkansas on the South a distance of 235 miles and extending West from the Mississippi River to the uplands of Bloomfield and Crowley's Ridges having a maximum width of 45 miles. The Drainage Districts in the basin serve as the local cooperation organization for work on flood control and drainage improvements done with Federal funds for projects under the appropriation for Flood Control, Mississippi River and Tributaries.

Within the St. Francis Basin and the Lower Mississippi Valley we are witnessing a great industrial expansion and the economy in this area is improving rapidly throughout the entire basin and especially along the Mississippi River. This industrial growth and prosperity could not exist without drainage and flood protection made possible by the appropriations from your Committee.

The budget amount for Civil Works fiscal year 1994 appropriations for the Mississippi River and Tributary is being reviewed by your Subcommittee and I request that you recommend $9,600,000 for the St. Francis Basin Arkansas and Missouri. The Civil Works project within the basin is near completion and is scheduled to be completed by the year 2000. There are several construction projects scheduled for this fiscal year and others needed before it can be complete that are of vital interest to the St. Francis Levee District.

We support the amount of $360,000,000 requested by the Lower Mississippi Valley Flood Control Association for the Lower Mississippi Valley. This is an amount the Executive Committee of the Association feels is necessary to adequately fund the projects and progress on with the Civil Works projects during the coming fiscal year.

I feel the criteria for cost sharing on the Water Resources Development Act of November 17, 1986 (Public Law 99–662 Ability to Pay) for determining the ability of local interest groups to pay is not responsive to the intent of the authorizing legislation. Quoting from the law: "The ability of any non-federal interest to pay shall be determined by the Assistant Secretary of the Army (Civil Works) in accordance with procedures established by the Secretary." The Secretary has determined that project benefits are to be used in determining the cost-share alternative of non-federal interest and this has resulted in some authorized flood control projects will never be constructed unless the ability to pay criteria is changed.

We have a large number of members present today attending the Appropriation Hearings that have come to show their support for the St. Francis Basin Project and the Mississippi River and Tributaries Projects.

I feel this Subcommittee will give fair consideration to needs of the Mississippi River and Tributaries appropriations and I appreciate the time given and work you do to advance the development of the water resource projects.

STATEMENT OF M.V. WILLIAMS, CHAIRMAN, EXECUTIVE COMMITTEE, LOWER MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION

Senator JOHNSTON. Please proceed, Mr. Williams.

Mr. WILLIAMS. Mr. Chairman and distinguished members of the committee, my name is M.V. Williams, and my home is in Friendship, TN. That is located between the middle and the south forks of the Forked Deer River.

It is my pleasure to serve as the chairman of the executive committee of the Lower Mississippi Valley Flood Control Association, with headquarters in Memphis, TN. Since I was just elected to that position this past December, this is my first time to testify before this distinguished committee.

And I am, indeed, honored, and feel very privileged to be granted this opportunity. Mr. Chairman, I have submitted a written statement for the record, so I will, for the sake of brevity, condense that statement.

ASSOCIATION MEMBERSHIP

But realizing that there are new members of this committee, I will take the time to briefly discuss the Lower Mississippi Valley Flood Control Association, which is an agency composed almost entirely of public bodies having local responsibility for flood control, drainage, bank stabilization, and navigation improvement in parts of Illinois, Kentucky, Mississippi, Tennessee, Arkansas, Missouri, and Louisiana.

Our members are public officials who, for the most part, are elected by the people. The association represents practically all of the levee and drainage districts, municipalities, port, and harbor commissions, and other State agencies in the lower Mississippi Valley, extending from Cape Girardeau, MO, to the Gulf of Mexico.

These organizations and agencies are political subdivisions of the various States in which they are organized and function. We have appeared before this committee and have served the people in the valley for over 60 years.

In the past, the principal reason for our appearance before this committee was to provide you data to justify adequate appropriations to complete the Mississippi River and tributaries projects as quickly as possible.

FUNDING REQUEST

That has not changed, even though this is a unique year, and we believe it is the first time that we have testified without benefit of the President's budget request and the Corps of Engineer's capabilities.

Without this usual information, we would like to request that this committee strongly consider a minimum appropriation for fiscal year 1994 for the Mississippi River and tributary projects of $360 million.

In requesting that such moneys be appropriated for flood control and navigation works of the lower Mississippi Valley, we are not unmindful of the fact that in these critical times our Nation is being called upon to rectify an economic condition that needs immediate attention.

We feel that we are justified in urging appropriations for our project, for the reason that the assets and resources of this great Nation must not be neglected during these times. We know of no other appropriation which contributes as much to national wealth and resources as flood control and navigation for the major rivers of this country.

MR&T PROJECT BENEFITS

Millions of acres which were overflow lands decades ago are now highly productive and contributing to our national wealth. These lands, by reason of their geographic location, are the most fertile of the Nation.

They produce an abundance of food and fiber for the general welfare and prosperity of the country. The inland waterways of the Nation provide the cheapest, and in some cases, the only method to move bulk commodities that are also absolutely essential to the general welfare and prosperity of the country.

Moneys appropriated by Congress for flood control and navigation have and will augment our natural resources and improve our economic well-being. The appropriations made by Congress for the Mississippi River and tributaries project are investments in this country's future.

The Mississippi River and tributaries project more than paid for itself in reduced monetary losses, and only one flood, but this is not the complete story.

The real benefits of this project are the reduction in human suffering, the improved health, and the well-being of the citizens. All of the approved methods known to us for making economic and environmental projects analysis fall far short of fully evaluating these human needs.

Since the productivity of the millions of acres of low-lying lands adjacent to the main stem of the lower Mississippi River are totally dependent upon the integrity of the flood control works, any major slowdown in the completion of this project will represent economic strangulation to this productive portion of our Nation.

We are aware of the ever-increasing demands on the Federal dollar, and the many complex problems that the Congress is confronted with, but we believe that this project is economically sound, environmentally necessary, and we urge its completion with all deliberate haste.

We are fully aware that this subcommittee is principally concerned with the appropriations of funds. But, Mr. Chairman, this is the only opportunity we have to make the Congress, and especially you gentlemen, who are the experts in water resources, aware of our problems.

We continue to hold a firm belief that all decisions concerning water resources development should be made in the open forum of the Congress, and more than ever before, it is plain to us that only the Congress of the United States can save the vitally needed and too long delayed Mississippi River and tributaries project.

ABILITY TO PAY AND PROJECT COST SHARING

Several things still stand in our way toward reaching the goal that we in this committee have worked toward since 1928. One of the first and most frustrating of the problems facing us is the executive department's refusal to change their criteria that is being used to determine the ability to pay the non-Federal cost sharing for authorized and justified flood control projects.

Unfortunately, the executive department is still operating under the false assumption that even the poorest communities in States can afford at least 25 percent of the cost of these projects.

Mr. Chairman, we are here today representing those poorest communities and States and we wish to emphatically assure you that such an assumption is completely erroneous, and lacks any basis of fact.

We note with pleasure that the May 15, 1992, Senate report stated that the Committee on Environment and Public Works remained concerned that the procedures for determining non-Federal ability to pay for purposes of cost sharing are inadequate.

Unfortunately, such words or instructions were not included in the Water Resources Development Act of 1992, so we are still faced with the same dilemma.

We will request and would certainly appreciate any and all assistance this committee could render. This association has accepted the concept of cost sharing and the local people for many, many years have met their commitments and have done their share.

It is simply that we cannot agree with the executive department's criteria for the ability to pay and we do not believe it meets the full intent of the Congress. We wish to restate our strong desire for and we urge the Congress to pass legislation concerning regulations and protection of the natural wetlands of this Nation.

We support Congressman James Hayes's bill and Senator John Breaux's companion bill, because it is our belief that the passage of the legislation would not only bring reason and common sense to the present chaotic situation, but would also finally define and classify wetlands, and would also require just compensation for the taking of the private rights and property.

We stand united in our opposition to the present obvious abuse of the citizen's right to private ownership. We also stand united in our belief that if wetlands constitute public assets, then they should be purchased with public funds. We restate our support for protection of natural wetlands and continue our involvement in the protection of the environment in a reasonable manner.

CORPS REORGANIZATION

I wish to take this opportunity to express our gratitude to the Congress for effectively halting two undesirable plans to reorganize the Corps of Engineers. We reaffirm our confidence in the ability and the integrity of the Corps and we believe downsizing and streamlining is required.

But after discussion with the Congress, should that happen, we will continue to oppose reorganization proposals which will hinder their ability to capably perform their civil works programs and we are convinced that the present plan does just that.

BENEFITS TO NAVIGATION

Mr. Chairman, even though our organization's name is flood control association, and it has been since 1922, this committee, and especially you, Mr. Chairman, are well aware that we are vitally concerned with navigation on this Nation's inland waterways system.

In fact, a major constitutionally stated objective of our agency is to secure the stabilization of the banks of the Mississippi River in order to assure permanency of location for harbor facilities and industrial sites, and to obtain deeper and more reliable navigation channels.

We now find that we are facing three major problems with the continuing well-being of navigation on our inland waterways systems. I have detailed these problems in my written statements, so I will merely touch the high points here.

INCREASE IN BARGE FUEL TAX

First is a proposed towboat fuel tax increase from 19 cents a gallon to $1.19 per gallon. We are firmly convinced that such a tax increase, coupled with the energy tax, will create an economic disaster, adversely impact foreign trade, devastate agriculture, and could completely dismember the inland waterways system that is the envy of the rest of the world, and which provides the cheapest, least environmentally damaging, and, in most cases, the only method to move bulk cargo.

MISSOURI RIVER OPERATIONAL CHANGES

Second is the proposed changes in the upper Missouri River master plan, which has the potential, if fully implemented, to not only halt navigation on the lower Mississippi River, but also increase massive damage from saltwater intrusion to the city of New Orleans and the coastal marshlands of Louisiana.

During record low river stages in 1988 on the lower Mississippi River, the only thing that stopped the mentioned catastrophic happenings were water releases from the upper Missouri reservoirs.

YAZOO RIVER, BELZONI BRIDGE

Finally, and a more regional problem, is the removal of the very old and abandoned turn bridge across the Yazoo River at Belzoni, in Humphreys County, MS. The Corps of Engineers has affirmed that this bridge is a problem for navigation and they also have stated that they have no authority to remove the old bridge in whole or in part.

It is our contention that the bridge, if not removed or demolished, will fall into the Yazoo, halt navigation, and destroy the floodwater carrying capability of the Yazoo River. We would appreciate the help of this committee in solving this problem.

In closing, let me reemphasize that Federal works projects with proven merit, such as the Mississippi River and tributaries project represent a sound Federal investment, which will return to the taxpayers of this country generous benefits.

Such Federal investments contribute to the economic well-being of the Nation by reducing unemployment, adding to the stability and economic growth of agriculture and industry, and providing a flood-free environment for the welfare of the people of the Mississippi Valley.

We affirm the position we have always held that the physical geography of the Mississippi River is such that flood control interests do not stop at the main river, but extend upstream along the adjacent tributaries and valleys.

The flood control plan on the lower Mississippi River, therefore, cannot be considered adequate or complete until the flood control plans for these valleys, authorized as a part of the Mississippi River and tributaries project, are completed.

Mr. Chairman, I would like to express to you and other members of your committee our appreciation for this opportunity to appear before you, and for the understanding and consideration you have always given our requests.

[The statement follows:]

STATEMENT OF M.V. WILLIAMS

Mr. Chairman and distinguished members of the Committee, my name is M.V. Williams and my home is in Friendship, Tennessee between the Middle and South Forks of the Forked Deer River. I am the President of the West Tennessee Tributaries Association. It is also my pleasure to serve as Chairman of the Executive Committee of the Lower Mississippi Valley Flood Control Association with headquarters in Memphis, Tennessee. Since I was elected to that position this past December this is my first time to testify before this distinguished Committee and I am indeed honored and feel very privileged to be granted this opportunity.

Since there are new members of the Committee I will take the time to briefly discuss the Lower Mississippi Valley Flood Control Association which is an Agency composed almost entirely of public bodies having local responsibility for flood control, drainage, bank stabilization and navigation improvements in parts of Illinois, Kentucky, Mississippi, Tennessee, Arkansas, Missouri and Louisiana. Our members are public officials who for the most part are elected by the people. The Association represents practically all of the levee and drainage districts, municipalities, port and harbor commissions and other state agencies in the Lower Mississippi Valley, extending from Cape Girardeau, Missouri to the Gulf of Mexico. These organizations and agencies are political subdivisions of the various states in which they are organized and function. We provide an agency through which the people of the Lower Mississippi Valley may speak and act jointly on all flood control, navigation, bank stabilization and major drainage problems. We have appeared before this Committee and served the people in the Valley for over sixty years.

In the past the principal reason for our appearance before this Committee was to provide you data to justify adequate appropriations to complete the Mississippi River and Tributaries project as quickly as possible. That has not changed even though this is a unique year and we believe a first time that we have testified without benefit of the President's Budget Request and Corps of Engineers' Capabilities. Without this usual information we will request that this Committee strongly consider a minimum appropriation for fiscal year 1994 for the Mississippi River and Tributaries project of $360,000,000.

In requesting that such moneys be appropriated for flood control and navigation works of the Lower Mississippi Valley, we are not unmindful of the fact that in these critical times our Nation is being called upon to rectify an economic condition that needs immediate attention. We feel that we are justified in urging appropriations for our project for the reason that the assets and resources of this great Nation must not be neglected during these times. We know of no other appropriation which contributes as much to national wealth and resources as flood control and navigation for the major rivers of this country. Millions of acres which were overflow lands decades ago are now highly productive and contributing to our national wealth. These lands by reason of their geographic location are the most fertile of the nation. They produce an abundance of food and fiber for the general welfare and prosperity of the country. The inland waterways of the nation provide the cheapest and in some cases the only method to move bulk commodities that are also absolutely essential to the general welfare and prosperity of the country. Moneys appropriated by Congress for flood control and navigation has and will augment our natural resources and improve our economic well-being. The appropriations made by Congress for the Mississippi River and Tributaries project are investments in this nation's future.

The Mississippi River and Tributaries project more than paid for itself in reduced monetary losses in only one flood, but this is not the complete story. The real benefit of this project are the reduction in human suffering, the improved health and the well being of the citizens. All of the approved methods known to us for making economic and environmental project analysis fall far short of fully evaluating these human needs. Since the productivity of the millions of acres of low lying lands adjacent to the main stem of the Lower Mississippi River are totally dependent upon the integrity of the flood control works, any major slow down in the completion of this project will represent economic strangulation to this productive portion of our nation. We are aware of the ever increasing demand on the federal dollar and the many complex problems that the Congress is confronted with, but we believe that this project is economically sound, environmentally necessary, and we urge its completion with all deliberate haste.

We are fully aware that this subcommittee is principally concerned with the appropriation of funds but Mr. Chairman this is the only opportunity we have to make the Congress and especially you gentlemen who are the experts in water resources aware of our problems. We continue to hold a firm belief that all decisions concerning water resources development should be made in the open forum of the Congress and more than ever before it is plain to us that only the Congress of the United States can save the vitally needed and too-long delayed Mississippi River and Tributaries Project.

Several things still stand in our way toward reaching the goal that we and this Committee have worked toward since 1928. One of the first and most frustrating of the problems facing us is the Executive Department's refusal to change their criteria that is being used to determine the "Ability-To-Pay" the Non-Federal cost sharing for authorized and justified flood control projects.

Unfortunately the Executive Department is still operating under the false assumption that even the poorest communities and states can afford at least 25 percent of the cost of these projects. Mr. Chairman, we are here today representing those poorest communities and states and we wish to emphatically assure you that such an assumption is completely erroneous and lacks any basis of fact. We note with pleasure that the May 15, 1992 Senate Report stated that the Committee on Environment and Public Works remained concerned that the procedures for determining Non-Federal "Ability-To-Pay" for purposes of cost sharing are inadequate. Unfortunately such words or instructions were not included in the Water Resources Development Act of 1992 so we are still faced with the same dilemma. We will request and would sincerely appreciate any and all assistance this Committee could render.

This Association has accepted the concept of cost-sharing and the local people have for many, many years met their requirements and done their share. It is simply that we cannot agree with the Executive Department's criteria for the "Ability to Pay" and we do not believe it meets the full intent of the Congress.

We wish to restate our strong desire for and we urge the Congress to pass legislation concerning regulations and protection of the Natural Wetlands of this Nation. We support Congressman James Hayes' Bill and Senator John Breaux's companion Bill because it is our belief that passage of that legislation would not only bring reason and common sense to the present chaotic situation but would also finally define and classify Wetlands and would also require just compensation for the taking of private rights and property. We stand united in our opposition to the present obvious abuse of the Citizen's rights to private ownership. We also stand united in our belief that if Wetlands constitute public assets then they should be purchased with public funds. We restate our support for protection of Natural Wetlands and continue our involvement in protection of the environment in a reasonable manner.

I wish to take this opportunity to express our gratitude to the Congress for effectively halting two undesirable plans to reorganize the Corps of Engineers. We reaffirm our confidence in the ability and integrity of the Corps and we believe downsizing and stream-lining is required but only after discussion with the Congress. We will continue to oppose reorganization proposals which will hinder the Corps of Engineer's ability to capably perform their civil works programs, and we are convinced that the present plan does just that.

Mr. Chairman even though our organization's name is Flood Control Association and has been since 1922, this Committee and especially you Mr. Chairman are well aware that we are vitally concerned with navigation on this nation's inland waterways system, in fact a major constitutionally stated objective of our Agency is to secure the stabilization of the banks of the Mississippi River in order to assure permanency of location for harbor facilities and industrial sites, and to obtain deeper and more reliable navigation channels.

We now find that we are facing three major problems with the continuing well-being of navigation on our inland waterways system.

First is a proposed towboat fuel-tax increase from 19 cents per gallon to $1.19 per gallon. We are firmly convinced that such a tax increase coupled with the energy tax will create an economic disaster, adversely impact foreign trade, devastate agriculture and could completely dismember the inland waterways system that is the envy of the rest of the world and which provides the cheapest, least environmentally damaging and in most cases the only method to move bulk cargo. This tax will more than double the cost of fuel used by towboats and would add more than $3.00 per ton to the cost of moving grain.

Second is the proposed changes to the Upper Missouri River Master plan which has the potential if fully implemented to not only halt navigation on the Lower Mississippi River but also create massive damage from salt-water intrusion to the city of New Orleans and coastal Marshlands of Louisiana. During record low-river stages in 1988 on the Lower Mississippi River the only thing that stopped the mentioned catastrophic happenings were water releases from the upper Missouri reservoirs. If in the future such water releases are delayed or stopped the damage to both the economy and the environment would be enormous.

Lastly and a more regional problem is the removal of the very old and abandoned turn-bridge across the Yazoo River at Belzoni in Humphreys County, Mississippi. The Corps of Engineers has affirmed that this bridge is a problem for navigation, they also have stated that they have no authority to remove the old bridge in whole or in part. The Yazoo River is a navigable stream that has barge traffic on it from Greenwood, Mississippi, on its north to Vicksburg, Mississippi, on its south, where it enters the Mississippi River, and Belzoni, Mississippi is an intermediate point on the Yazoo River between the cities of Greenwood and Vicksburg.

It is reasonable and needful that the old, condemned steel turn-bridge, together with its concrete center pier, be completely removed in a manner that the channel of the Yazoo River at this point be restored to its normal and natural conformity so as to enable the safe, risk free passage of tow-boats and barges up and down the Yazoo River past the City of Belzoni and, at the same time, restore the channel to the flood-water carrying capacity it once had.

It is our contention that the bridge, if not removed or demolished, will fall into the Yazoo, halt navigation and destroy the flood-water carrying capability of the Yazoo River. We would appreciate the help of this Committee in solving this problem.

In closing let me reemphasize that federal works projects with proven merit such as the Mississippi River and Tributaries Project represent a sound federal investment which will return to the tax payers of this country generous dividends. Such federal investments contribute to the economic well being of the Nation by reducing unemployment; adding to the stability and economic growth of agriculture and industry; and providing a flood free environment for the welfare of the people of the Mississippi Valley.

We reaffirm the position we have always held that the physical geography of the Mississippi River is such that flood control interests do not stop at the main river but extend upstream along the adjacent tributary streams and valleys. The Flood Control plan on the Lower Mississippi River therefore cannot be considered adequate or complete until the flood control plans for these valleys, authorized as a part of the Mississippi River and Tributaries project, are completed.

Mr. Chairman, I would like to express to you and other members of your Committee our appreciation for this opportunity to appear before you and for the understanding and consideration you have always given our requests.

STATEMENT OF CURTIS G. PATTERSON, DIRECTOR OF PUBLIC WORKS AND FLOOD CONTROL DIVISION, LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Mr. WILLIAMS. With your permission, I would like to call on Mr. Patterson as our final witness.

Senator JOHNSTON. Welcome, Curtis.

Mr. PATTERSON. Good morning, Mr. Chairman. I am delighted to be here, and certainly appreciate the opportunity to appear here before you.

I am Curtis Patterson, director of the public works and flood control division, located within the Louisiana Department of Transportation and Development, in Baton Rouge, LA.

I also bring you greetings from our secretary, Gen. Jude Patin, U.S. Army, retired, formerly with the Corps of Engineers. He sends his best wishes to you.

My comments today summarize the written brief submitted on behalf of the State of Louisiana, and the 23-member agencies making up the Association of Levee Boards of Louisiana.

Our comments also will include portions of testimony, and in support of their testimony, that you will hear from other areas and agencies of Louisiana, including the Red River Valley Association, Red River Waterway Commission, and the ports and navigation interests of Louisiana.

First of all, in the past, Louisiana has been generally in support of the budget allowance proposed by the administration for the Mississippi River and tributaries project.

As mentioned previously, we have not seen that budget this year, so we are very hopeful that it will at least be as generous as it has been in the past so that we can continue the work in the lower Mississippi River and the other flood control and navigation works in Louisiana. We certainly hope that it is in that context and we can again support the budget submitted to the administration.

MISSISSIPPI RIVER DRAINAGE AREA

Let me reiterate some statistics that I have done in the past. And I know you are familiar with them, Mr. Chairman, but for those who have not heard them, and specifically for the record, for new ones who are not familiar with them, I feel that I must repeat them, because they are so important for people to fully understand the flood control needs in Louisiana.

The Mississippi River, as large as it is, being the fourth largest drainage basin in the world, exceeded only by the watersheds of the Amazon, the Congo, and the Nile Rivers, drains about 41 percent, or 1¼ million square miles of the United States and parts of two Canadian provinces.

All the runoff from major river basins, such as the Missouri River, and upper Mississippi, the Ohio River, including Tennessee and others; and the Arkansas River and the White River flows into the lower Mississippi, emptying it into the Gulf of Mexico, through Louisiana.

The jurisdiction of levee boards in Louisiana includes one-third of the State's total area. However, the importance of this one-third of the State can be seen by the fact that it contains 75 percent of the State's population, and nearly 97 percent of the State's disposable personal income.

Traditionally, the levee district areas are water rich and have fallen heir to industrial development that ranks high in the Nation. It has been estimated that about 60 percent of the State's agricultural products come from the levee district areas.

So you can see why Louisiana and its 23 levee and drainage districts represented here today are so interested in flood control projects. With these statistics in mind, I would also like to quote some information to you.

LOWER MISSISSIPPI RIVER DELTA STUDY

The first quote is:

> Historically, the economic development of the lower Mississippi delta has paralleled its geography. The river promoted trade and the land encouraged agriculture. Over 2 million acres of water area, including more than 89,000 miles of rivers and streams, dictate the landscape and much of the land use in the region.

And quoting further from that same source:

> Notwithstanding its assets, however, the delta is also a region of hardship and poverty. In 1985, per capita income for the region averaged $8,224, compared to the nationwide figure of $12,464. In 1988, the unemployment rate for rural delta counties averaged 8.87 percent, compared to a nationwide 5.5-percent average unemployment rate.
>
> Tunica County, MS, is the poorest county in the country, with 52.8 percent of its population living in poverty. West Carroll Parish in Louisiana experienced an unemployment rate in 1988 of 24.86 percent, more than four times the national average; and Lee County, AR, had a per capita income of only $6,287 in 1985, or about 50 percent below the national average.

With these statistics in mind, a third quote I would like to bring to you is this:

> Congress should waive the local cost-share requirements for water resource projects in the Delta for a 10-year transition period.

The source of these quotes is a report to Congress prepared as mandated under Public Law 100–460, entitled, "The Delta Initiatives," submitted May 14, 1990, by its chairman, the former Governor of Arkansas, and now our President, Bill Clinton.

Gentlemen, this information sounds good to you and I submit it to you this morning.

We are interested in seeing the completion of the Mississippi River and tributaries project. This includes the Mississippi River and those tributaries of the Mississippi River, such as the Atchafalaya basin, Tensas basin, and a portion of the lower Red River.

We are also interested in maintaining the integrity of the flood control features of the Red River and the Ouachita and Black Rivers.

AMITE RIVER AND TRIBUTARIES

I would like to bring several items to your attention concerning authorized projects other than the MR&T projects in Louisiana. The Amite River and tributaries flood control project is of great concern to us. Record floods have devastated the greater Baton Rouge for the past several years and the most latest being in January 1993.

The State is actively pursuing, along with the Corps of Engineers, a study for flood control on the Amite River, spending thousands of dollars on this study. This project is still a few years away.

COMITE RIVER DIVERSION

In the meantime, the Corps has been moving ahead with the Comite River diversion, which is part of the Amite River and tributaries project, and which Congress authorized for construction in the 1992 Water Resource Development Act.

We request your approval of continued funding for this project. The project will help relieve flooding along the Comite River and at the point where it empties into the Amite River, reduce backwater flooding some 12 to 18 inches, providing significant flood reduction benefits in lower East Baton Rouge, southwestern Livingston, and the eastern part of the eastern Ascension parishes.

OUACHITA AND BLACK RIVERS

The Ouachita and Black Rivers have an authorized project for flood control and another one for navigation. However, the unusual thing is bank protection is not an authorized feature of either of these projects.

Bank erosion has been actively occurring in more recent years, threatening portions of the levee and flood control systems along the river. We need congressional authorization for bank protection along the Ouachita and Black Rivers navigation system to protect the integrity of these projects and conserve valuable lands.

RED RIVER WATERWAY, LA

The Red River Waterway navigation project is well underway and needs continued funding toward its accelerated completion. We all know that the sooner we can complete a project, the more economical its construction costs, and the sooner economic benefits can be realized from use of the project.

We support the testimony being presented before you today on this project by the Red River Waterway Commission and the Red River Valley Association, and it is a project specifically recommended in the quotation given to you previously from "The Delta Initiatives."

With the Red River Waterway project bringing navigation to Shreveport, the water supply needs of the area will increase. Reducing the chloride content of the Red River, which is technically and economically feasible, would make the Red River usable for an economical water supply.

We ask that funds be provided to continue the construction of the Red River chloride control project, since this will enhance further economic development in the Red River Valley and make the navigation project prove even more economically feasible than previously anticipated.

We are very much interested in expediting the completion of the Mississippi River Ship Channel project, gulf to Baton Rouge. A part of the navigation feature of this project, from the gulf, to mile 181, near Donaldsonville, LA, is completed.

We are still waiting for the Corps to approve the general design memorandum for phase 2. We are hoping to sign an agreement and begin construction this year.

This project is an example of infrastructure development that President Clinton has stated he supports to make our country competitive in the world market. We urge your support in funding it.

The mitigation plan for saltwater intrusion in Plaquemines Parish under phase 1 has finally been approved by the Corps. We hope to sign an agreement very shortly. We are hopeful the construction will begin soon and we urge your support in that endeavor. Again, this is another one of the projects that was recommended in "The Delta Initiatives."

The passage of the Coastal Wetlands Planning, Protection, and Restoration Act has been a positive force for Louisiana. This legislation is not only assisting the Nation and Louisiana in protecting and restoring pressure wetlands of national significance, but has also freed up Corps' funds for other much-needed flood control and navigation projects.

The topography of Louisiana's coastline makes it very vulnerable to hurricanes and coastal storms and presents a danger to the people of the area, as Hurricane Andrew reminded us this year, this past year.

The hurricane protection projects already under construction, as well as those currently under study, need to be funded so that these projects can move along toward completion, thereby providing the protection so desperately needed in these low-lying areas.

We would also like to thank Congress for prompt appropriation of the emergency funds given to help restore the damages caused by Hurricane Andrew to some of our coastal hurricane protection projects.

GRAND ISLE, LA, RECONNAISSANCE STUDY

In 1992, the Louisiana Legislature created a new levee district, known as the Grand Isle Independent Levee District, independent indicating the Grand Isle's unique characteristic of being the only human inhabited barrier island peninsula community in Louisiana, located in the Gulf of Mexico, some 63 miles southwest of New Orleans, LA.

Because of its isolation, Grand Isle cannot be connected to any other levee alignment in the lower Mississippi River delta area. The importance of providing flood protection to the unique community is based on the benefit factor of having such facilities as the U.S. Coast Guard, Exxon, Conoco, and many other oil patch support services supplying many oil rigs in the Gulf of Mexico and vicinity.

Grand Isle also hosts a unique French-speaking culture and is a growing tourist resort area. Its importance is also based on is protective value as a buffer to the delicate ecosystem of the interior wetland marshes of Louisiana.

Until now, because of its status as virgin territory as far as a levee system is concerned, its northern exposure in the Camanotta Bay area is extremely vulnerable to periodic flooding.

The southern area on the Gulf of Mexico's side has a hurricane surge protection, or sand dune-type of levee in place. The primary function of the new levee district is to provide storm protection measures on the remaining portion of the island.

We respectively request authorization and funding for the Corps of Engineers to perform a reconnaissance study to determine if a viable Federal flood control project can be justified for Grand Isle.

We wish to express our thanks to the Appropriations Subcommittees on Energy and Water Development of the House and Senate for allowing us to present this brief on the needs of Louisiana.

Without reservation, practically every single project in Louisiana which has been possible through actions of these committees has shown a return in benefits many times over. The projects which you fund affect the economy of not only Louisiana, but the Nation as a whole.

The Public Works and Flood Control Directorate, within the Department of Transportation, appreciates the accomplishments of the past and solicits your considerations of the appropriations requested for fiscal year 1994.

Thank you, sir.

Senator JOHNSTON. Thank you very much, Mr. Patterson. We are well aware of all of those projects and support them all. You make a very good case for all of them.

COST-SHARING POLICY

I might just mention, though, two or three items quickly. First of all, regarding cost sharing, we agree, and we would like to take care of those communities which are particularly poor and hard hit. Twenty-five percent for them is really just too much. I mean it is beyond their capability.

However, as you know, we are hamstrung on that by the authorizing law, which is in the jurisdiction of the Environmental and Public Works Committee. So, we continue to lobby them and wish you would do the same, to give us some relief from that requirement, because we are stuck with the requirement, and we cannot vary that.

We are very interested in all of these projects. But the emphasis at this point is to get navigation to Shreveport by 1994.

This is the last year for substantial funding for locks and dams 4 and 5. The Mississippi River Ship Channel and all of these others are very good projects, and we are going to try to provide the needed funds, as we did last year. I think we appropriated a total of $351 million last year, is that correct, and your request for fiscal 1994 is $367 million.

Mr. PATTERSON. I believe so.

Senator JOHNSTON. So we are going to do the best we can in a very, very tight budget year, but since we are familiar with these home folks projects down there, we will try to be sure that we take care of the absolute necessities first before we go to projects which are not quite so important.

Gentlemen, thank you very much. We appreciate your testimony.

Mr. PATTERSON. Thank you, sir.

Mr. WILLIAMS. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF CURTIS PATTERSON

MISSISSIPPI RIVER AND TRIBUTARIES PROJECT

The Louisiana Department of Transportation and Development, Public Works and Flood Control Directorate, is the agency designated to represent the State of Louisiana in the planning and orderly development of its water resources. This statement is presented on behalf of the State of Louisiana and contains recommendations for fiscal year 1994 appropriations for Louisiana projects under the Mississippi River and Tributaries Project.

Louisiana contains the terminus of the Mississippi River, which has the fourth largest drainage basin in the world, exceeded only by the watersheds of the Amazon, Congo, and the Nile rivers. The river drains 41 percent, or 1¼ million square miles, of the United States and parts of two Canadian provinces. All of the runoff from major river basins such as the Missouri and Upper Mississippi, the Ohio including the Tennessee and others, and the Arkansas and White, flows into the Lower Mississippi, which empties into the Gulf of Mexico through Louisiana.

The jurisdiction of levee boards in Louisiana includes one-third of the State's total area. However, the importance of this one-third of the State can be seen by the fact that it contains nearly 75 percent of the State's population and about 97 percent of the State's disposable personal income. Traditionally, the levee district areas are water rich and have fallen heir to industrial development that ranks high in the nation. It has been estimated that about 60 percent of the State's agricultural products come from levee district areas. So you can see why Louisiana and its nineteen levee districts are so interested in seeing the completion of the Mississippi River and Tributaries project.

In making the following recommendations regarding construction, surveys and some selected operation and maintenance items, the State of Louisiana, understands the Administration's need to reduce the Federal deficit, but would hope that Congress and the Administration will honor their prior commitments to infrastructure development and fund our requests.

Mississippi River and tributaries—Summary of recommended appropriations

Louisiana projects	*Louisiana request*
Construction:	
Atchafalaya basin	$28,000,000
Floodway system	6,700,000
Channel improvements	63,300,000
Mississippi delta region project—Davis Pond	8,000,000
Mississippi and Louisiana estuarine areas	6,900,000
Mississippi River levees (Louisiana only)	17,000,000
Tensas basin, Arkansas and Louisiana—Red River backwater area	6,700,000
General investigations: Morganza to the gulf	563,000
Preconstruction, engineering and design: Louisiana State Penitentiary levee	300,000
Operation and maintenance:	
Atchafalaya basin	12,937,000
Baton Rouge Harbor—Devil Swamp, LA	230,000
Bayou Cocodrie and tributaries	115,000
Bonnet Carre Spillway	767,000
Channel improvement	67,669,000
Lower Red River—South bank levees	67,000
Mississippi delta region, Caernarvon, LA	188,000
Mississippi River levees	7,308,000
Old River Control Structure	3,901,000
Red River backwater area	2,545,000
Tensas Basin, Boeuf and Tensas Rivers	2,573,000

NOTE.—The projects listed above are only those in Louisiana and directly affecting the State. We realize that there are others outside of Louisiana that are vitally important to the Project and in these areas, we endorse the recommendations of the Lower Mississippi Valley Flood Control Association.

Atchafalaya basin.—Request: $28,000,000. This project is a Main Stem component of the flood control plan for the Mississippi River and Tributaries Project. The Mississippi River can safely carry only one-half of the project flood, or 1,500,000 cubic feet per second, below Old River; the other 1,500,000 cubic feet per second must be discharged through the Atchafalaya Basin. The levees which must confine this flow to the basin are now deficient because they have settled below original design grade due to consolidation of the underlying soils, and the design has been revised upward. This places the lives and welfare of approximately 650,000 people and their property and improvements in 13 parishes in the immediate vicinity of the Atchafalaya Floodway in jeopardy each flood year. The tax assessment records indicate the value of potential flood losses to be approximately $8 billion, not including public improvements. Over the past half century, we have supported the Mississippi River and Tributaries Project and have agreed that construction of flood protection works should start upstream and progress downstream. As a result, the Mississippi River and Tributaries Project is now more than 90 percent complete in sites upstream from Louisiana while the levees in the Atchafalaya Basin can contain only approximately 85 percent of the project flood. Work on this project has been underway since 1928 and isn't scheduled for completion until the year 2010.

Channel improvements.—Request: $63,300,000. Channel improvements and stabilization provide protection of levees and the many improvements behind them, as well as preventing unsatisfactory alignment where the river's bank is unstable. This project is also a Main Stem component of the flood control improvement program for the Mississippi River and the benefits are the same as for the other main stem components. The Mississippi River and Tributaries Project above Louisiana is about 90 percent complete but to a much lesser extent within Louisiana. Because of the improvements upstream, increased flows are a major problem in Louisiana where the project is lagging. The funds we are requesting are for use in Louisiana and will provide for the dredging and revetment work necessary to accommodate these increased flows. Additional funds will be required for work upstream of Louisiana.

Mississippi River levees.—Request: $17,000,000. Construction of mainline Mississippi River Levees in Louisiana also lags behind the construction in the upper valley. The same reasons that apply to our request for funds for channel improvements on the Mississippi River and improvements in the Atchafalaya Basin, apply equally well to our request for funds for the Mississippi River levees. The $17 million requested are for use in Louisiana, additional funds will be required by upstream states.

Mississippi delta region project, Davis Pond.—Request: $8,000,000. Davis Pond Freshwater Diversion Project is necessary to aid in the fight against coastal erosion and land loss. The State of Louisiana's commitment to this project is demonstrated by our agreement to provide 25 percent of the cost of construction, operation and maintenance of the Davis Pond structure despite Congressional project authorization at 100 percent Federal cost as mitigation for the Mississippi River and Tributaries Project.

Louisiana State Penitentiary levee.—Request: $300,000. The Louisiana State Penitentiary Levee was included into the Federal system of the Mississippi River and Tributaries Project by Congress in 1986 and was re-authorized for an additional five years in the Water Resources Development Act of 1990. The 1990 Act also revised the definition of a single beneficiary eliminating the Administration's reason for its reluctance to proceed with this project. In 1990 Congress appropriated $300,000 for this project, but the Administration did not allocate these funds. We are hopeful that the new Clinton Administration will view this project in a more favorable light. We urge your support once again in funding this project.

Local contributions for flood control improvements.—Historically, Louisiana has always done its part in cooperation with the Federal agencies concerned with flood control. The Louisiana State Board of Engineers, the forerunner of the Department of Transportation and Development, Public Works and Flood Control Directorate, was created in 1879, the same year as the Mississippi River Commission, to coordinate the planning and construction of the required flood control facilities to protect the State. Since that time, local expenditures for flood control have exceeded $730,000,000. This amount adjusted to 1979 dollars represents expenditures in excess of $5.3 billion. Nearly one-half of the potential flooded area of the Lower Mississippi River Valley lies in Louisiana. Local expenditures for flood control have increased with the growth of the valley. This record not only meets, but exceeds any National Water Policy local participation requirements ever put into practice.

The State of Louisiana, Department of Transportation and Development, Public Works and Flood Control Directorate, in particular, wishes to commend the Appropriations Sub-Committees on Energy and Water Development and express our appreciation for the foresight and understanding exhibited for water resources projects which are vital to the national interest. We solicit your further consideration of the recommendations presented herein.

NAVIGATION, HURRICANE PROTECTION, AND WATER RESOURCES PROJECTS IN LOUISIANA

The Louisiana Department of Transportation and Development, Public Works and Flood Control Directorate, is the agency designated to represent the State of Louisiana for the coordinated planning and development of water resources, including flood control, navigation, drainage, water conservation and irrigation projects; therefore, this statement is presented on behalf of the State of Louisiana. We are pleased to present the recommendations for fiscal year 1994 appropriations for Louisiana projects. The projects listed herein are separate from those in the statement by the Public Works and Flood Control Directorate on the Mississippi River and Tributaries Project.

In making the following recommendations regarding construction, surveys and some selected operation and maintenance items, the State of Louisiana, understands the Administration's need to reduce the Federal deficit, but would hope that Congress and the Administration will honor their prior commitments to infrastructure development and fund our requests. We feel that water resources projects are probably the most worthwhile and cost effective projects in the Federal budget, having to meet stringent economic justification criteria not required of other programs. We ask that this be taken into consideration in the final decision making process to appropriate the available funds.

Project	*Louisiana request*
Construction:	
Aloha-Rigolette area, Red River, LA	$2,967,000
Lake Pontchartrain and vicinity, hurricane protection	24,044,000
Larose to Golden Meadow	2,977,000
Mississippi River:	
Gulf Outlet	1,500,000
Ship channel, Baton Rouge to gulf	6,161,000
New Orleans to Venice	1,233,000
Ouachita and Black Rivers	
Ouachita River levees, culvert replacement	3,800,000
Pearl River, Slidell, St. Tammany Parish, LA	1,000,000
Red River chloride control	6,000,000
Red River Waterway	135,000,000
Westwego to Harvey Canal, LA	8,410,000
Preconstruction engineering and design:	
Comite River, LA	800,000
East Baton Rouge Parish, LA	100,000
West bank—east of Harvey Canal, LA	500,000
Authorized studies:	
Intracoastal WW locks, Louisiana (Algiers)	1,300,000
Amite River and tributaries	160,000
Bayou Lafourche and Lafourche jump waterway	20,000
Bossier Parish	
Grand and White Lakes, LA	
Gulf Intracoastal Waterway, Louisiana and Texas section	
Jefferson-Orleans Parishes urban flood control, Louisiana	2,800,000
Lake Cataouatche levee, LA	400,000
Louisiana coastal land loss and marsh creation	
Mississippi River gulf outlet, bank erosion	400,000
West bank of Mississippi River in the vicinity of New Orleans	
Operation and maintenance:	
Atchafalaya River, Bayou Chene, Boeuf and Black	5,587,000
Barataria Bay Waterway	135,000
Bayou Bodcau Reservoir	402,000
Bayou Lafourche and Lafourche—jump waterway	
Bayou Pierre	25,000
Bayou Segnette Waterway	
Bayou Teche	239,000
Bayou Teche and Vermilion River	
Caddo Lake	119,300
Calcasieu River and Pass	9,800,000
Freshwater Bayou	880,000
Gulf Intracoastal Waterway	13,007,000
Houma navigation canal	210,000
Lake Providence Harbor	285,000
Madison Parish Port	75,000
Mermentau River	690,000

Project	*Louisiana request*
Mississippi River:	
Baton Rouge to gulf	42,803,000
Gulf outlet	13,591,000
Outlets, Venice	2,348,000
Ouachita and Black Rivers	5,102,000
Pearl River, LA and MS	2,500,000
Red River Waterway—Mississippi River to Shreveport	6,629,000
Removal of aquatic growth	1,644,000
Wallace Lake	196,000
Waterway—Empire to the Gulf of Mexico, LA	....

Ouachita River levees, culvert replacement.—Request: $3,800,000. Congress authorized the culvert replacement in the Ouachita River Levees as a Federal responsibility in the 1991 Appropriations Act by appropriating $400,000 to start construction. There is a need to continue the culvert replacement program as authorized by Congress. The Corps was directed by Congress in 1992 to reprogram available funds into the project in order to proceed in an orderly, but expeditious manner. We ask that Congress continue this process by appropriating $3,800,000 to continue this much needed project.

Mississippi River Ship Channel, gulf to Baton Rouge, LA.—Request: $6,161,000. We are very much interested in expediting the completion of the Mississippi River Ship Channel, Gulf to Baton Rouge, LA., Project. We are still waiting for the Corps to approve the Phase 2 General Design Memorandum. We were hoping to sign an agreement and begin construction this year. This project is an example of infrastructure development that President Clinton has stated he supports to make our country competitive in the world market. And we urge your support in funding it.

The mitigation plan for saltwater intrusion for Phase 1 has finally been approved by the Corps. We are hopeful that construction will begin soon.

Comite River, LA.—Request: $800,000. The Comite River, which drains an area of 348 square miles of agricultural and urban lands in southeast Louisiana, is a major tributary of the Amite River. The maximum flood of record in the Amite River Basin occurred in 1983 causing approximately $170,000,000 in damages, $48,000,000 in the Comite River Subbasin. This project would help to alleviate the flooding problems by diverting flows of the Comite River to the Mississippi River through a 12-mile diversion channel. This project was authorized for construction in the Water Resources Development Act of 1992. The State of Louisiana is anxious to get this project into the construction phase as soon as possible.

Amite River and tributaries and East Baton Rouge Parish, LA.—Request: $260,000. These study areas are both in the Amite River basin which has experienced six major floods between 1973 and 1993. We urge Congress to continue the funding of this study to find a beneficial solution to the flooding in these areas.

Red River Waterway—Mississippi River to Shreveport, LA.—Request: $135,000,000. The State of Louisiana wishes to express its desire to your committees for continued spending on the Red River Waterway Project at its accelerated construction schedule. The accelerated construction schedule mandated by your funding recommendations in previous years has saved the taxpayers of the United States $300,000,000 on the construction of the Red River Waterway Project and we urge the continuation of this policy.

Aloha-Rigolette area, Red River, LA.—Request: $2,967,000. It is anticipated that the Local Cooperative Agreement will be entered into by the Town of Colfax soon and construction can begin. We, therefore, urge your support for the funding of this much needed flood control project.

Red River basin chloride control project.—Request: $6,000,000. With the Red River Waterway Project bringing navigation to Shreveport the water supply needs of the area will increase. Reducing the chloride content of the Red River, which is technically and economically feasible, would make the Red River usable for an economical water supply. We ask that funds continue to be provided for the construction of the Red River Chloride Control Project since this will enhance further economic development in the Red River Valley and make the Navigation Project prove even more economically feasible than previously anticipated.

Coastal Wetlands Planning, Protection and Restoration Act.—The passage of the Coastal Wetlands Planning, Protection and Restoration Act has been a positive force for Louisiana. This legislation is not only assisting the Nation and Louisiana in protecting and restoring precious wetlands of national significance but it has also freed up Corps' funds for other much needed flood control and navigation projects.

The State of Louisiana commends the Corps on its cooperation in coordinating the beneficial use of dredged material for coastal preservation.

Grand Isle flood protection.—In 1992 the Louisiana Legislature created a new levee district known as the "Grand Isle Independent Levee District." "Independent" indicating Grand Isle's unique characteristic of being the only human-inhabited barrier island-peninsula community in Louisiana, located in the Gulf of Mexico, 63 miles southwest of New Orleans, Louisiana. Because of its isolation, Grand Isle cannot be connected to any other levee alignment in the lower Mississippi River Delta area.

The importance of providing flood protection to the unique community is based on the benefit factor of having such facilities as the United States Coast Guard, Exxon, Conoco, and many other oil patch support services supplying many oil rigs in the Gulf of Mexico and vicinity. Grand Isle also hosts a unique French speaking culture and is a growing tourist resort area. Its importance is also based on its protective value as a buffer to the delicate ecosystem of the interior wetland marshes of Louisiana.

Until now, because of its status as virgin territory as far as a levee system is concerned, its northern exposure in the Caminada Bay area is extremely vulnerable to periodic flooding. The southern area, on the Gulf of Mexico side, has a hurricane surge protection or "sand dune" levee in place. The primary function of this new Levee District is to provide storm protection measures on the remaining portion of the island.

We respectfully request authorization and funding for the Corps of Engineers to perform a reconnaissance study to determine if a viable Federal flood control project can be justified for Grand Isle.

We wish to express our thanks to the Appropriations Subcommittees on Energy and Water Development of the House and Senate for allowing us to present this brief on the needs of Louisiana. Without reservation, practically every single project in Louisiana which has been made possible through actions of these committees has shown a return in benefits many times in excess of that contemplated by the authorizing legislation. The projects which you fund affect the economy of not only Louisiana but the nation as a whole. The Public Works and Flood Control Directorate appreciates the accomplishments of the past and solicits your consideration of the appropriations requested for fiscal year 1994.

RED RIVER VALLEY WATER RESOURCE PROJECTS

STATEMENT OF JOHN STROUD, PRESIDENT, RED RIVER VALLEY ASSOCIATION

Senator JOHNSTON. We will begin now with the Red River Valley Association. I am glad to welcome you all here, and we will begin with John Stroud, who is the—is the chairman or the president?

Mr. STROUD. We changed the nomenclature, Mr. Chairman, to president. A few years ago, it was chairman.

Senator JOHNSTON. Well, Mr. President, we are glad to have you.

Mr. STROUD. Thank you, sir.

It is a great pleasure to be here on behalf of the Red River Valley Association. As the chairman pointed out, we are about to reach a milestone. This association was founded in 1925. Our predecessor had to look a long way down the road to get to what we see is just ahead.

I have been privileged to be here as a presenter of testimony for 26 years and navigation on the Red River looked a long way away a few years ago, but it was a great pleasure to ask for the last appropriation for the J. Bennett Johnston Waterway—of navigation to Shreveport.

We will have specific requests. I simply want to point out that we not only seek the completion of that project, there are bank stabilization projects upstream that have been working for over 20 years. We need the continuation of those.

Based on feasibility studies, we look forward to the extension of navigation from Dangerfield, TX, to Index, AR, depending on those results. Certainly we support the initiation of these remaining chloride control projects that will give us the clean water throughout the Red River that we desperately need.

Flood control, we certainly cannot forget, reminded so recently in May 1990, and we have projects of levee rehabilitation, and to try to protect us when those occur. We have four speakers from each of the four States that will address these items a little more specifically.

[The statement follows:]

STATEMENT OF JOHN F. STROUD, JR.

Mr. Chairman and members of the Committee. I am John Stroud, and pleased to represent the Red River Valley Association as its President. Our organization was founded in 1925 with the express purpose of uniting the citizens of Arkansas, Louisiana, Oklahoma, and Texas to develop the land and water resources of the Red River Basin.

You will shortly hear presentations from individuals who will address the specific needs of their particular states. However, before they began, I would like to briefly comment on a few of the concerns we have for the future physical and economic well-being of the citizens residing in the four state Red River Basin area.

First, Navigation. Thanks to this committee's continued support, the Red River Navigation project to Shreveport-Bossier City, Louisiana—the largest metropolitan area in the River Basin—is over 70 percent complete. Locks and Dams 1, 2 and 3 are complete. Locks and Dams 4 and 5 are under construction. To fully realize the benefits this project will bring to the area—and the nation—we need your support to insure the simultaneous construction and completion of these remaining two locks and dams by the end of 1994, and the continuance of navigation ultimately to Daingerfield, TX and Index, AR. The entire area continues to suffer major unemployment, and the navigation project, although not the total solution, will help revitalize our economy. Also, there are two important military facilities; Barksdale AFB, and the Louisiana Army Ammunition plant within close proximity of Shreveport-Bossier City. Fort Polk is downstream, and three additional Army facilities, Long Horn Army Ammunition Plant at Marshall, Texas and Lone Star Depot and Lone Star Army Ammunition Plant, are located upstream near Daingerfield and Texarkana. We continue to believe that water transportation from this area will be invaluable in future national conflicts. While we hope that our nation will not be, faced with such future aggression, should there be a need, a completed Red River Waterway could make it possible for our area to respond more quickly and more effectively.

Second, Flood Control. You will recall in 1990 major areas of northeast Texas, southwest Arkansas and the entire length of the Red River in Louisiana were ravaged by the worst flooding to hit the region since 1945 and 1957. More than 700,000 acres were flooded with total damages estimated at $20.4 million. However, it could have been much worse. The Corps of Engineers estimates that without the flood control measure authorized by Congress over the past several decades an additional 1.3 million acres would have been flooded with an estimated $330 million in additional flood damage to agricultural and urban developments. We continue to consider flood control a major objective of the Red River Valley Association.

And, Third, Clean Water. Nearly 4,000 tons of natural salts, primarily sodium chloride, enter the upper reaches of the Red River each day, rendering downstream waters unusable for most purposes. Several years ago, Congress authorized funding for the Truscott Brine Lake project, which is located on the South Fork of the Wichita River in King and Knox Counties, Texas. After the project became operational in 1987, an independent panel of experts found that the project not only continues to perform beyond design expectations insofar as providing cleaner water, but has an exceptionally favorable cost benefit ratio, in fact, one of the best such ratios of any federally funded project in the area. The Association urges Congress to continue supporting the Chloride Control projects with approval of our increased funding request in order to assure a clean water supply for residential, commercial, industrial, and agricultural uses for Basin residents.

We are sincerely grateful to you for the past support you have given our various projects. We hope that we can count on you again to fund our needs and complete the projects that will help us diversify our economy and create the jobs so badly needed by our citizens.

I'm now pleased to present Tom Newsham, the Executive Director of the Red River Valley Association who will introduce the witnesses for each of the four states.

Thank you.

Red River Valley Association—Summary of fiscal year 1994 requests

Project	
Basinwide projects (appropriations):	
Red River Waterway project:	
Mississippi River—Shreveport-Bossier City, LA	$135,000,000
Shreveport-Bossier City, LA-Daingerfield, TX Reach	1,580,000
Red River chloride control	14,000,000
Bank stabilization:	
Levees and bank stabilization below Denison Dam	3,000,000
Emergency bank protection	3,500,000
Bank stabilization, Index, AR to Denison Dam	
Arkansas projects (appropriations):	
Levees and bank stabilization below Denison Dam	(1)
Emergency bank protection	(1)
Red River bank stabilization, Index, AR to Denison Dam	(1)
Little River County study	640,000
Louisiana projects:	
Appropriations:	
Cypress-Black Bayou watershed	(2)
Atachafalaya basin	(2)
Red River backwater area	(2)
Aloha-Rigolette project	(2)
Lower Red River south bank levee	280,000
Chatlin Lake Canal, diversion canal and Bayou Rapides flood control project	(2)
Lower Red River levees	
Authorizations/appropriations:	
Bayou Cocodrie and tributaries	
Red River master plan for recreation	
Oklahoma (appropriations):	
Red River basin chloride control project	(1)
Red River bank stabilization, Index, AR, to Denison Dam	(1)
Emergency bank stabilization	(1)
Texas projects (appropriations):	
Shreveport-Bossier City, LA—Daingerfield, TX Reach	(1)
Cooper Lake and channels	10,000,000
McGarth Creek project	1,700,000
Lake Wichita/Holliday Creek	+1,000,000
Emergency bank stabilization	(2)
Bowie County Levee District No. 1	(2)
Crowell Brine Lake	(2)

[1] Included under basinwide request.
[2] Full Corps capability.

ATTENDEES—RED RIVER VALLEY ASSOCIATION

John F. Stroud, Jr., President of the RRVA, Texarkana, AR
Jerry Boughton, Vice-President, Louisiana, Shreveport, LA
William C. Chapman, Vice-President, Oklahoma, Ardmore, OR
Jimmy Banks, Vice-President, Texas, Wichita Falls, TX
Gordon Matteson, Director, Foreman, AR
John S. Turner, Jr., Director, Shreveport, LA
Jim Nipper, Director, Stamps, AR
Norman Budd, Director, Alexandria, La
Ben Littlepage, Director, Natchitoches, LA
Phil Alford, Director, Lewisville, AR
J.W. "Bill" Dean, Director, Hughes Springs, TX
Ron Glenn, Director, Wichita Falls, TX
Ed Lehman, Director, Vernon, TX
Ed Hawkins, Director, Foreman, AR
Tom Newsham, Executive Director, Shreveport, LA

Arkansas

Arkansas Red River Commission: Phil Alford, Chairman, Lewisville, AR; Gordon Matteson, Foreman, AR; Ed Hawkins, Foreman, AR; Jim Nipper, Stamps, AR; John F. Stroud, Texarkana, AR; and David Potter, Texarkana, AR.

Louisiana

City of Shreveport: Newton Bruce, Chief Administrative Officer; Caddo-Bossier Port Commission: Wayne T. Davis, President, Plain Dealing, LA; R.M. Prestridge, Vice-President, Bossier City, LA; Jerry C. Harris, Bossier City, LA; Sinclair B. Kouns, Shreveport, LA; T.E. McElroy, Commissioner at Large; John W. Holt, Executive Director, Bossier City, LA.

Port supporters: Dr. Gordon H. Schuckers, Assistant Dean, School of Allied Health Professions, LSU Medical Center.

Port engineer: Chris Demopulos.

Bossier Levee District: Syd Burt, President, Bossier City, LA; Timothy Larkin, 1st Vice-President, Bossier City, LA; Arthur Wallace, Jr., Secretary, Bossier City, LA; Doug Brown, Commissioner, Bossier City, LA; and Paul Johnson, Commissioner, Bossier City, LA.

Louisiana Department of Transportation and Development: Curtis Patterson, Baton Rouge, LA; and Peter Allain, Baton Rouge, LA.

Red River Waterway Commission: Richard Gibson, Coushatta, LA; Robert Lucky, Natchitoches, LA Pat Johnson, Natchitoches, LA; Odell Hodnett, Colfax, LA; Norman Budd, Alexandria, LA; Albin Provosty, Alexandria, LA; Marc Dupree, Jr., Marksville, LA; Ben Littlepage, Executive Director, Colfax, LA; Ken Guidry, Assistant Executive Director, Natchitoches, LA; Cathy Penrod, Natchitoches, LA; Larry Taylor, Bossier City, LA; Mike Boydstun, Natchitoches, LA; Ted Hunter, Natchitoches, LA; and Hank Bruser, Natchitoches, LA.

Red River Valley Area Council: Roy E. Barmore, Alexandria, LA; and Jack H. McBride, Alexandria, LA.

Red River Development Council: Dr. Leland Scoggins, Natchitoches, LA.

Caddo Levee District: Sam Barnwell, Shreveport, LA; Dan Logan, Gilliam, LA; Murrell Stansell, Shreveport, LA; Harold White, Shreveport, LA; and Sam Windham, Shreveport, LA.

Caddo Parish Commission: Harold Denny, President; John Reid, Vice-President, Vivian, LA; Francis Bickham, Administrator and COE, Shreveport, LA; and Wayne Waddell, Commissioner.

Interested parties: William C. Winaham, Bossier City, LA; Mrs. Shirley Newsham, Shreveport, LA; Mrs. Kathryn Littlepage, Colfax, LA; Mrs. Phyllis Budd, Alexandria, LA; Mrs. George Alice Dupuy, Marksville, LA; Mrs. Susanne Provosty, Alexandria, LA; Mrs. Karen Logan, Shreveport, LA; Mrs. Harold Denny, Shreveport, LA Mrs. Chris Demopulos, Shreveport, LA; Mrs. T. E. McElroy, Bossier City, LA; Mrs. Penny Johnson, Bossier City, LA; Mrs. Annie Brown, Bossier City, LA; Mrs. Pat Taylor, Bossier City, LA; Mrs. Martha Boydston, Alexandria, LA Mrs. Phil Alford, Lewisville, AR; Mrs. Charlotte Potter, Texarkana, AR; Mrs. Donna K. Matteson, Foreman, AR; Mrs. Charlene Hawkins, Foreman, AR; and Mrs. Billie Nipper, Stamps, AR.

Oklahoma

William C. Chapman, Ardmore, OK.

Texas

Northeast Texas Municipal Water District: Bill Dean, Hughes Springs, TX; Uvalde Stoemer, Hughes Springs, TX; Dr. W. S. Terry, Jr., Jefferson, TX; and Jesse DeWare, Jefferson, TX.

Red River Authority of Texas: Ed Lehman, Vernon, TX; amd Ronald Glenn, Wichita Falls, TX.

RED RIVER VALLEY ASSOCIATION PLATFORMS, RESOLUTIONS, AND PROGRAM OF WORK

INTRODUCTION

The Red River Valley Association is a voluntary group of citizens banded together to advance the economic development and future well-being of the citizens of the four state Red River Basin area in Arkansas, Louisiana, Oklahoma and Texas.

For the past 68 years, the Association has done notable work in the support and advancement of a program to develop the land and water resources of the Valley to the beneficial use of all the people. To this end, the Red River Valley Association offers its full support and assistance to the various Port Authorities, Chambers of

Commerce, Economic Development Districts and other local governmental entities in developing the area along the Red River.

The Resolutions contained herein were adopted by the Association during its 68th Annual Meeting in Shreveport, Louisiana on February 9 and 10, 1993, and represent the combined concerns of the citizens of the Red River Basin area as they pertain to the goals of the Association, specifically:

—Economic and Community Development
—Flood Control
—Bank Stabilization
—A Clean Water Supply for Residential, Commercial, Industrial and Agriculture Uses
—Solar and Hydroelectric Power Generation
—Recreation
—Navigation

The Red River Valley Association is aware of the constraints on the federal budget, and has kept those restraints in mind as these Resolutions were adopted. Therefore, and because of the far-reaching regional and national benefits addressed by the various projects covered in these Resolutions, we urge the members of Congress to review the materials contained herein and give serious consideration to funding the projects at the levels requested.

John F. Stroud President; Lynn Lowe, Vice-President, Arkansas; Jerry Boughton, Vice-President, Louisiana; William C. Chapman, Vice-President, Oklahoma; Jimmy Banks Vice-President, Texas.

BASINWIDE PROJECTS—APPROPRIATIONS RESOLUTIONS

RED RIVER WATERWAY PROJECT

The Rivers and Harbors Act of 1968 authorized the Red River Waterway Project featuring a navigation channel from the Mississippi River to Shreveport-Bossier City, Louisiana and Daingerfield, Texas; and stabilization of the banks of the Red River from the Mississippi River to Shreveport-Bossier City, Louisiana; Shreveport-Bossier City, Louisiana to Daingerfield; Shreveport-Bossier City, Louisiana to Index, Arkansas; and vicinity of Index, Arkansas to Denison Dam, Texas. Construction of Locks and Dams 1, 2, and 3 is now complete. Construction is underway on Locks and Dams 4 and 5 in the Mississippi River to Shreveport-Bossier City, Louisiana reach.

Completion of the Red River Waterway will significantly boost the economy throughout the river basin and reduce widespread unemployment in the area. Average annual shipping on the waterway is expected to be over 8 million tons and estimated benefits are expected to be greater than $107 million annually. This type of progress should not be denied citizens of the Red River Basin and the nation. In order to begin realizing project benefits and minimize future project cost increases, planning, design and construction should proceed in an orderly fashion in order to achieve project completion in a reasonable period of time.

With the Red River Navigation project's Locks and Dams 1, 2, and 3 completed, the Red River Valley Association believes it an economic imperative that construction on the remaining two locks and dams continue on an established and organized schedule so that the project is completed on the Shreveport-Bossier City reach by the end of 1994. Phase 1 construction was begun in the summer of 1990 on Locks and Dams 4 and 5, and construction of the Phase 2 contracts was begun in early 1992. We urge Congress to continue providing the funding necessary for continued construction of the Locks and Dams and associated work in Pools 4 and 5 in order to provide navigation to Shreveport-Bossier City by the mid-90's; target dates are necessary for orderly planning of commercial development and earliest beneficial use of the waterway.

At present, the communities of Alexandria/Pineville in Rapides Parish, Natchitoches Parish, Colfax in Grant Parish, Coushatta in Red River Parish and Shreveport-Bossier City in the parishes of Caddo and Bossier, are in the process of planning and developing public port facilities for their respective areas.

Alexandria/Pineville has constructed port facilities and the port is now in use; Colfax, Natchitoches and Coushatta are developing port sites. The Caddo-Bossier Port Commission completed Phase 1A of their port in Feb. 1993. Phase 1 construction continues. The $8.5 million allocated for Phase 1 will be 50% committed by the end of February 1993. The Caddo-Bossier facilities are being developed in response to needs expressed for the availability of waterborne transportation facilities by many existing industries in the Port Commission's service area which extends to Dallas/Fort Worth, according to a study commissioned by the Port Commission.

Planning to ensure that public port facilities will be ready to benefit the local, state and national economies when navigation is returned to the communities on the upper reaches of the Red River has been made tremendously difficult because of the lack of a firm construction schedule for the remaining two Locks and Dams. Thousands of badly needed jobs are at stake, and therefore, the Red River Valley Association urges Congress to appropriate $135 million for fiscal year 1994 to maintain a construction schedule for Locks and Dams 4 and 5 to enable their completion as scheduled by Dec. 94. Such funding and instruction will allow orderly planning and economic development, and will ensure the area can realize the project's beneficial return within the earliest time frame.

The Red River Navigation Project originally was recognized and should now be viewed as a whole project producing benefits for the entire region and nation. Piecemeal deauthorization of the project features associated with the Navigation Project, such as the Shreveport/Daingerfield Reach should not be allowed to occur. The Red River Valley Association supports the continuation of the authorization for the Shreveport/Daingerfield Reach, and requests $1.58 million be appropriated in fiscal year 1994 for the continuation of the following Studies and preconstruction planning: (1) Economic—To take into consideration considerable additional tonnage that has been located and will greatly affect the benefit cost ratio. (2) Recreational—To determine the recreational benefits, which have never been truly considered, that would accrue to this Project. (3) Environmental—To give further consideration to alternate routing, and to determine the benefit to Caddo Lake of this Project; and the consequences to Caddo Lake if this Project is not constructed.

Red River basin chloride control project

The Red River Basin Chloride Control Project is imperative in order to realize full utilization of surface water supplies in the states of Texas, Oklahoma, Louisiana and Arkansas. Presently, more than 1,000 miles of streams in the river basin are severely contaminated by natural brines. Consequently, water of the streams is not suitable for municipal and most industrial and agricultural purposes. Large volumes of salt enter the streams from 15 natural sources, 10 of which are located in Texas. There exists an immediate need for good quality water within the Red River Basin.

Passage of the 1966 and 1970 Flood Control Acts (Public Law 89–789 and Public Law 91–611) authorized construction of measures to control the natural salt pollution from Areas VI, VII, VIII, IX, X, XIII, XIV and XV in the basin, subject to the provision that construction on the project could not be started until approved by the Secretary of the Army. Initiation of construction at Area VIII on the Wichita River, prior to the required approval by the Secretary of the Army, was authorized by the 1974 Water Resources Act. Construction at Area VIII, which includes the Truscott Brine Lake, was begun in February 1977. The Bateman Pump Station, pipeline and Truscott Lake were put into operation in May of 1987.

Congress authorized construction of the entire Red River Chloride Control Project to control natural brine sources as a 100 percent federal project (P.L. 89–789 and Public Law 91–611). Subsequently, the components of the overall project were reevaluated by the Corps of Engineers, at the request of Congress and the results of the re-evaluation have been reported in the Corps' "Supplemental Data to Arkansas Red Basin Chloride Control, Red River Basin Design Memorandum No. 25, General Design, Phase I-Plan Formulation", Texas, I and II, Department of the Army, Tulsa District Corps of Engineers, Oklahoma, November 1980. The re-evaluation reaffirmed both the economic and technical feasibility of this project. Subsequently, as authorized by P.L. 99–662, a panel was formed to assess the improvement in water quality downstream of Area VIII to determine its consistency with the water quality estimated in the development of project benefits.

The panel submitted its report to the Secretary of the Army and the Committee on Environmental and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives in August 1988. The panel determined the operation of the completed works in Area VIII were consistent with the project benefits projected by Design Memorandum No. 25, and continues to perform beyond design expectations.

Current appropriations have initiated construction of the low flow dams and pump stations in Area VII and X, accelerated designs for the Crowell Brine Lake and brine detention reservoir, and pump stations and Salt Creek Lake in Area VI. With current construction underway, accelerated project designs and right of ways purchased, we request that Congress appropriate $14,000,000 for fiscal year 1994 for the Tulsa District COE to continue this work as well as initiation of final engineering and design at Areas VI, XIII, and XIV.

Bank stabilization of the Red River

Red River levees and bank stabilization below Denison Dam.—Red River Levees and Bank Stabilization Below Denison Dam is the authorization for constructing levees, flood control structures and bank stabilization below Denison Dam. The facilities constructed under this authorization are the first lines of flood protection for the Red River Valley and its citizens. Accelerated and new caving of the river banks of the Red River continue to endanger existing flood control structures and levees as well as valuable agricultural lands, highways, railroads, utilities, home and other valuable resources and improvements within the Red River Valley. A systematic program of bank stabilization and other flood control measures can prevent these disastrous losses that are presently occurring.

Because of the construction of the Red River Waterway Project, a dangerous tendency has developed to de-emphasize construction of flood control and bank stabilization works under the Red River Levees and Bank Stabilization program. This tendency should be halted and reversed least the impression be created that the program is no longer needed or has been completed. Following the disastrous flood of May 1990, there can be no doubt of the importance of properly maintained levees and of bank stabilization. All areas not protected by properly maintained levees were flooded and the only protection from enormous bank caving was where revetment projects have been constructed by the Corps.

The Red River Levees and Bank Stabilization Below Denison Dam Project is the only comprehensive flood control program on the Red River containing authorization for construction of a variety of flood control measures, levees and other flood control works. Some of the projects planned in the original authorization project have not been completed and these must be constructed in order for the citizens of the Red River to derive necessary flood protection.

Only minimal funds have been appropriated by Congress for the Red River Levees and Stabilization Below Denison Dam in recent years. Bank caving on Red River has progressed in several locations to a critical state. Railroads, major public highways, levees and other flood control works are threatened, and unless action is taken in the near future, these facilities will be destroyed, endangering lives and property of the citizens of the Red River Valley.

Another example of flood control work needed is levee reshaping along the main stem of Red River in the state of Arkansas. Many of these levee sections were severely tested by the May 1990 flood, and it is apparent that reshaping is needed to increase their integrity, substantially reduce maintenance costs, and provide additional structural strength at appropriate elevations needed to protect citizens, agricultural land and transportation systems. The Red River Valley Association joins the Arkansas Red River Commission in urging Congress to appropriate funds in fiscal year 1994 to complete an engineering study of the Levees on the Red River from Index, AR to the Louisiana State line to establish and prioritized levee locations that have deficient grades, slopes and crown. This report should be completed in fiscal year 1994 and include the recommendations with construction costs for all identified areas. Any funds not expended for the engineering study should be applied to the highest priority area to develop contracts and construction plans and drawings.

In summary, it is imperative that Red River Levees and Bank Stabilization Below Denison Dam continue as authorized by Congress and that adequate funding be appropriated to accomplish the construction of this needed protection. The Red River Valley Association recommends that $3.5 be appropriated for this project in fiscal year 1994 for completion of the evaluation of levee deficiencies in Arkansas that was initiated in fiscal year 1992, and to continue levee rehabilitation.

Emergency bank protection

Although Federal projects have been authorized for flood control and navigation, many active caving banks cannot be stabilized because they are not yet sufficiently advanced or not included in earlier authorizations. The result is continuing, rampant destruction of valuable lands, threatening vital flood control facilities and endangering high-cost improvements such as bridges, pipelines, highways, railroads, utilities, cities and towns.

It is urgent that adequate funding of the item "Emergency Bank Protection" be continued to construct bank stabilization work as early as possible in the most critical locations instead of waiting several more years and experiencing the loss of millions of dollars due to damages. Further, continued neglect of these caving banks will substantially worsen alignment of the River, making future navigation realignment and stabilization much more costly and difficult. Many presently caving banks have an existing alignment that is usable for the navigation channel and should be preserved now.

In view of the critical need for immediate bank stabilization at many locations along the river, and the great unnecessary losses to caving activity which have been suffered by the people of the Red River Valley in the past and which can be expected to continue in the absence of immediate stabilization construction, the Red River Valley Association requests that the Congress direct the Corps of Engineers to expend the $3.5 million appropriated in fiscal year 1993 for Red River Emergency Bank Protection and, that the $3.5 million be used for the construction of Finn Revetment.

Bank stabilization—Index, AR, to Denison Dam

Widely fluctuating stages and high flows during the past several years have caused sharp increases in bank caving along the Red River from Index, AR to Denison Dam. This accelerated bank caving has caused the loss of valuable, vital improvements and non replaceable prime agricultural lands. Flood control structures and levees which protect the Valley from disastrous floods are also endangered. These disastrous losses can be stopped by a systematic program of bank stabilization. Progressive construction of such a program is absolutely essential to the safety growth and well-being of the Red River Valley. To further delay this vitally needed protection would be short-sighted.

In view of the fact that construction of bank stabilization is so badly needed and that the states of Oklahoma, Arkansas and Texas have agreed to the authorized cost-sharing requirements, the Red River Valley Association continues to support the previous authorization for the project and requests that the Corps of Engineers in fiscal year 1994 be directed to continue the engineering study and preconstruction planning work for modification of existing levees and construction of new levees.

Mississippi River and tributaries flood control project

The Red River Valley Association endorses the Mississippi River and Tributaries Flood Control Project, including all of its features and components, and stresses the importance of aggressively completing all features, particularly as it relates to the Red River Basin and its improvements. Since the Red River is a major factor in the Mississippi River and Tributaries Flood Control Project, the Red River Valley Association endorses the flood control and navigation improvements of the MR&T Project and necessary appropriations for completion.

ARKANSAS PROJECTS

Appropriations resolutions

Red River levees and bank stabilization below Denison Dam.—The Corps of Engineers indicated a few years ago that the levees along the main stem of the Red River in Arkansas required reshaping to conform to current design standards. Funding is needed to allow the Corps of Engineers to determine the deficiencies in the project levees in Arkansas that are a matter of grave concern to the levee districts, and to continue detailed design for construction of remedial measures. The levees were severely tested by the May 1990 flood, and it is apparent that reshaping is needed to allow vehicular traffic on top of the levees for inspection during a flood and to allow more comprehensive maintenance to be accomplished by having a more gentle slope on both sides of the levee which will also increase their integrity. The Red River Valley Association joins the Arkansas Red River Commission in urging Congress to appropriate the sum of $500,000 to complete an engineering study of the levees on the Red River within the State of Arkansas from Index, AR to the Louisiana State Line. This study began during fiscal year 1992 from a previous appropriation. The study should establish and prioritize locations of the levees that have deficient side slopes and crown widths. The Corps of Engineers should prepare and submit the construction plan to reshape and rehabilitate the levees that are found to have deficient grades, slopes and crowns. This report should include the associated construction costs for all identified areas and should be completed in fiscal year 1994. The Corps of Engineers is preparing to let a contact this fiscal year from funds appropriated by the last Congress to rehabilitate 2.4 miles of the levee beginning at the Arkansas-Texas boundary and extending downstream on the right descending bank of Red River. The association urges that $3 million be also appropriated to continue the levee rehabilitation downstream in Miller County, Arkansas from the 2.4 mile point to the intersection of the levee with US Highway 67.

Emergency bank protection

The most important need for funding under this program in Arkansas is for the construction of Finn Revetment. Congress appropriated $3.5 M for this fiscal year of Emergency Bank Protection Funds. The Senate Bill specifically indicated the funds were to be used for the construction of Finn Revetment, but the conference Committee Report erroneously approved the appropriations, but omitted the language. Continued neglect of the caving banks in Arkansas will substantially worsen alignment of the river, making future realignment for navigation and stabilization more costly and difficult and will erode the remaining works resulting in a waste of the original construction funds. Many caving banks still have an existing alignment that is usable for the navigation channel when it is authorized, and those banks should be preserved now.

The Finn Revetment should be initiated to stop the loss of valuable farmland and to stop the transfer of large quantities of sediment to the navigation system downstream. This reach of the river has been identified as having the most severe bank caving.

We urge that the $3.5 M appropriated but not allocated or spent be now allocated for this project or, in the alternative, we urge the appropriation of funds for the Emergency Bank Protection in the amount of $3.5 million for fiscal year 1994 for construction of Finn Revetment, and that such sum remain available until expended for such construction.

Red River bank stabilization, Index, AR, to Denison Dam.—Bank caving is not only a serious problem between Shreveport, Louisiana, and Index, Arkansas, but it continues upstream between Index, Arkansas, and Denison Dam, Texas. The Congress has appropriated money for the study of a comprehensive bank stabilization project in this reach of the river during the past three fiscal years. We urge the continuation of this preconstruction planning project recognizing that several years of planning are required before construction of this type project can begin. We hope that an orderly development up Red River can continue in the years ahead for the benefit of the people of Arkansas, Texas and Oklahoma bordering the Red River above Index, Arkansas. We are advised by the Tulsa District Corps of Engineers that they have sufficient funds in hand to complete the study, and therefore, no additional funds are requested.

Little River County study.—The Congress appropriated $150,000.00 in fiscal year 1992 and $237,000 and $400,000 in fiscal year 1992 to conduct in Little River County a feasibility study. The feasibility study is to explore the modification of existing levees and the construction of new levees to avoid a possible repeat of the devastating flood in May 1990. Total funding of $640,000.00 is needed to conduct the feasibility study in Little River County and sufficient funds are on hand, but for the study to take place there must be a cost sharing agreement with a sponsor that will pay one-half of the costs.

LOUISIANA PROJECTS

Appropriation resolutions

Red River Waterway project to Shreveport-Bossier City.—The Rivers and Harbors Act of 1968 authorized the Red River Waterway Project featuring a navigation channel from the Mississippi River to Shreveport-Bossier City, LA., and stabilization of the banks of the Red River from the Mississippi River to Shreveport-Bossier City, Louisiana. Construction of Locks and Dams 1, 2 and 3 is now complete. Construction is underway on Locks and Dams 4 and 5 in the Mississippi River to Shreveport-Bossier City, Louisiana reach.

Completion of the Red River Waterway will significantly boost the economy throughout the river basin and reduce widespread unemployment of the area. Average annual shipping on the waterway is expected to be over 8 million tons and estimated benefits are expected to be greater than $107 million annually. This type of progress should not be denied citizens of the Red River Basin and the nation. In order to begin realizing project benefits and minimize future project cost increases, planning, design and construction should proceed in an orderly fashion in order to achieve project completion in a reasonable period of time.

Planning to ensure that public port facilities will be ready to benefit the local, state and national economies when navigation is returned to the communities on the upper reaches of the Red River has been made tremendously difficult because of the lack of a firm construction schedule for the remaining two Locks and Dams. Thousands of badly needed jobs are at stake, and therefore, the Red River Valley Association urges Congress to appropriate $135 for fiscal year 1994 along with Congressional direction for the Corps of Engineers to maintain a construction schedule for Locks and Dams 4 and 5 to enable their completion by Dec. 94. Such funding and instruction will allow for orderly planning and economic development, and will ensure the area can realize the project's beneficial return within the earliest time frame.

To allow orderly conduct of river traffic and enhance navigation in the Shreveport-Bossier City, LA area once Locks and Dams 4 and 5 are complete, the Red River Valley Association urges Congress to instruct the Corps of Engineers, within the fiscal year 1994 navigation appropriation, to begin studies in fiscal year 1994 on the economic feasibility of continuing maintenance dredging from the Caddo-Bossier Port, South of Shreveport-Bossier City, to the vicinity of the I–220 bridge north of Shreveport-Bossier City, LA between mile 284 and 285.

Red River levees and bank stabilization below Denison Dam.—The Red River Levees and Bank Stabilization Below Denison Dam Project is the only comprehensive flood control program on the Red River containing authorization for construction of a variety of flood control measures, levees and other flood control works. Some of the projects planned in the original authorization project have not been completed and these must be constructed in order for the citizens of the Red River in Louisiana to derive necessary flood protection. Only minimal funds have been appropriated by Congress for the Red River Levees and Stabilization Below Denison Dam in recent years. Bank caving on the Red River has progressed in several locations to a critical state. Railroads, major public highways, levees and other flood control works are threatened, and unless action is taken in the near future, these facilities will be destroyed, endangering lives and property of the citizens of the Red River Valley.

Cypress-Black Bayou watershed—Local interests and the state of Louisiana in cooperation with the United States Department of Agriculture, Soil Conservation Service, have advanced construction of this project to the point where many benefits are being realized. Features of the project include: recreation and municipal water supply, a comprehensive recreational facility development and approximately 55 miles of channel improvement for flood prevention and agricultural water management, 11 weirs, two pumping plants and water control structures for distribution and irrigation use of water. The features of the watershed remaining to be constructed are channel improvements, weirs, pumping plants and writer control structures. Though these features, the agricultural water needs of the central Bossier Parish, LA area can be met during most years. Additionally, no assistance is provided in meeting municipal and industrial water needs.

The Red River Valley Association expresses its sincere appreciation for Congressional support in funding the Cypress-Black Bayou Watershed development and recommends that the financial support necessary for the completion of the project be provided.

Atchafalaya basin.—The Atchafalaya Basin is a key element in the flood control plan for the Mississippi River and its Tributaries that directly involve the Red River Basin area. Flood control is the primary purpose of the Atchafalaya Basin and its capability must be maintained and improved. The Red River Valley Association opposes any plan for use of the Atchafalaya Basin which reduces its effectiveness for flood control. However, the Association does not oppose other uses of the Basin, provided that they do not interfere with or prevent its use for flood control purposes. The Association urges that the studies being made on the Atchafalaya Basin area be completed as soon as possible and construction of the necessary flood control works in the area be resumed.

Red River backwater area.—The 1941 Flood Control Act authorized protection of additional areas in the Red River Backwater Area, where justifiable. A review in the late 1950s concluded that additional flood protection works were justified and authorized for the Larto Lake to Jonesville area, the Sicily Island area, the Below Red River area, and the Tensas-Cocodrie area. The Larto Lake to Jonesville area and the Tensas-Cocodrie area levee systems have been constructed and the Tensas-Cocodrie Pumping Station is completed. The Tensas-Cocodrie levees, were substantially completed in fiscal year 1992. Construction of these projects should be completed at the earliest possible time to provide the protection determined to be justified, authorized and necessary by the U.S. Army Corps of Engineers.

Aloha-Rigolette project.—This project, initially authorized in 1941 and constructed during the 1948–54 period, provides for the protection during high stages of the Red River of some 58,000 acres of alluvial land. Drainage from 340,000 acres that must flow through protected areas during lower river stages is disposed of by gravity flow through two 10 foot by 10 foot gated concrete drainage structures in the levee at the lower end of the project. This protected area has continued to develop agriculturally since construction of the project and now additional gates are needed to allow adequate gravity drainage during low river stages. As a result, local interests requested that additional studies be made of the project, paying particular attention to the adequacy of the flood gate which has now been determined to be significantly inadequate for current conditions.

A feasibility study was completed by the New Orleans District, Corps of Engineers in June 1989. The Red River Valley Association urges that Congress appropriate the full capability of the Corps fiscal year 1994 budget to continue construction activities for the project so that construction can be completed as soon as possible.

Lower Red River south bank levee.—The South Bank Levee is a feature of the Mississippi River and Tributaries Flood Control Project and calls for improvement of the existing levee from the community of Hot Wells, LA to Moncla, LA. Construction procedures include: strengthening and enlarging substandard levee reaches, raising the levee to the designed grade, bank stabilization to protect the levee and other miscellaneous levee and roadway improvements. This levee is of extreme importance since it protects 1.25 million acres of valuable lands and improvements from flooding. This work should be completed in a timely and orderly manner; therefore, the Red River Valley Association endorses an adequate appropriation by Congress for fiscal year 1994.

In addition, the Red River Valley Association requests to continue design of repairs or a replacement structure for, the Bayou Rapides Drainage structure and Pump Plant, as a feature of the MR&T Project, Lower Red River, South Bank Levee. The Association is aware of the deteriorated condition of the Bayou Rapides Drainage structure and Pump Station which is located within the Lower Red River, South Bank Levee Project authorized by the Flood Control Act 15 May 1928; P.L. 391, 70th Congress. The project consists of incorporation and enlargement of existing flood control features along the South Bank Levee alignment to provide protection to the area south and west of the Red River from Hot Wells to Monca, including the City of Alexandria. This floodgate and pump station was constructed in 1935 along the alignment of the subject project levee to provide a control at the outlet of Bayou Rapides and to prevent flooding by Red River Backwater. Reviews by the U.S. Army Corps of Engineers; Louisiana Department of Transportation and Development; and the Red River, Atchafalaya and Bayou Boeuf Levee District determined that the structure has severe structural deterioration and obsolete pumping equipment. Failure during a project flood would be disastrous with regard to the loss of life as well as property. The structure location is adjacent to Rapides General Hospital and the downtown area of Alexandria. The Association urges Congress to direct the Secretary of the Army to continue design of a replacement structure with funds provided by the bill under the MR&T Project, Lower Red River, South Bank Levee.

Chatlin Lake Canal, diversion canal and Bayou Rapides flood control project.—In September 1988, the U. S. House of Representatives Public Works and Transportation Committee adopted a resolution directing the U.S. Army Corps of Engineers to determine the advisability of providing flood protection in the Red River Valley affected by Chatlin Lake Canal, Diversion Canal and Bayou Rapides. Funds have not been received to begin this study. Local government has completed a preliminary report identifying flood relief which would directly and indirectly benefit parts of the parishes of Rapides, Avoyelles and Evangeline. Flooding of this area occurs at least four times a year as a result of federal government authorized construction of the South Bank Red River Levee and the West Atchafalaya Basin Protection Levee which intercepted the natural drainage channels. The pending study by the Corps will review the published report to determine the impact on federal interest in the project. The Red River Valley Association strongly recommends that funding for the study be authorized immediately and that the Corps of Engineers expedite completion of their review of the project as soon as possible.

Lower Red River levees.—The South Bank Levee of the Red River, Atchafalaya and Boeuf Levee District from Boyce to Moncla is a feature of the MR&T Flood Control Project. A continuation of this same levee from Moncla to Lake Long is under a different authorization, thereby denying the benefits of the MR&T authorization to the people and property in the unprotected area. The North Bank Levees of the Red River, in the same levee district, does not benefit from the MR&T authorization, yet they also protect the lives of many people and vast areas of farm land and improvements. Both the South Bank and the North Bank Levees of the Red River are part of the continuous protective system; the lower few miles from Moncla to Lake Long are part of that system. The Red River Valley Association recommends that Congress authorize the Corps of Engineers to review the present authorization of these levee systems with the view of including all portions in the same MR&T authorizations so as to provide equal benefits and protection to the people and property of the Red River Basin Area in Louisiana.

Authorizations and/or appropriations resolutions

Bayou Cocodrie and tributaries.—This project was authorized in 1941 and provides a drainage outfall for a large area of central Louisiana, including 120 miles of drainage channel, three water control structures and a major drainage structure in the West Atchafalaya Basin Protection Levee. The upper 100 miles of the project extending from Rapides Island west of Alexandria, Rapides Parish, to the tow of Washington, St. Landry Parish, is known as the Bayou Boeuf-Cocodrie Diversion Channel. The lower 21 miles of this channel is known as Bayou Courtableau.

Most of the project was completed in 1952. Since that time, as a result of extensive developments throughout this intercept drainage area, stages in the main channel system have continued to rise and have exceeded the design water surface by several feet on a number of occasions. Under present conditions, widespread flooding of agricultural lands and extensive damages from flooding of residential areas occur and continues increasing with each passing year. There is a critical need for improvements to these drainage channels which are intercepted by construction of the Red River South Bank and West Atchafalaya Floodway Levees.

For the lower part of the project (Bayou Courtableau), advanced engineering and design were considered to be completed in 1980. It now appears that additional studies of this portion of the project are necessary. These additional studies will continue to delay construction of several Public Law 566 projects for drainage improvements in this area which have not been allowed to proceed because of inadequate outlet through Bayou Courtableau. For the upper part of the project, Bayou Boeuf-Cocodrie Diversion Channel, the system is under a continuing re-study to determine improvements that need to be accomplished in the system. The Red River Valley Association urges that these additional studies be promptly completed so that construction of this outlet can begin.

Red River master plan for recreation.—Recognizing that recreation is an integral component of the Red River Waterway Project, the Red River Valley Association supports the development of recreational facilities as a part of the overall project construction. A Master Plan for Recreation has been cooperatively developed by the Red River Waterway Commission of Louisiana and the Corps of Engineers. The Red River Valley Association urges construction of the recreational facilities in accordance with the Master Plan.

OKLAHOMA PROJECTS

Appropriations resolutions

Red River basin chloride control project.—The Red River Basin Chloride Control Project is imperative in order to realize full utilization of surface water supplies in the states of Texas, Oklahoma, Louisiana and Arkansas. Presently, more than 1,000 miles of streams in the river basin are severely contaminated by natural brines. Consequently, water of the streams is not suitable for municipal and most industrial and agricultural purposes. Large volumes of salt enter the streams from 15 natural sources, 10 of which are located in Texas. There exists an immediate need for good quality water within the Red River Basin.

Passage of the 1966 and 1970 Flood Control Acts (Public Law 89–789 and Public Law 91–611) authorized construction of measures to control the natural salt pollution from Areas VI, VII, VIII, IX, X, XIII, XIV and XV in the basin, subject to the provision that construction on the project could not be started until approved by the Secretary of the Army. Initiating of construction at Area VIII on the Wichita River, prior to the required approval by the Secretary of the Army, was authorized by the 1974 Water Resources Act. Construction at Area VIII, which includes the Truscott Brine Lake, was begun in February 1977. The Bateman Pump Station, pipeline and Truscott lake were put into operation in May of 1987.

Congress authorized construction of the entire Red River Chloride Control Project to control natural brine sources as a 100 percent federal project (Public Law 89–789 and Public Law 91–611). Subsequently, the components of the overall project were re-evaluated by the Corps of Engineers, at the request of Congress, and the results of the re-evaluation have been reported in the Corps' "Supplemental Data to Arkansas-Red Basin Chloride Control, Red River Basin Design Memorandum No. 25, General Design, Phase I-Plan Formulation", Texas, I and II, Department of the Army, Tulsa District Corps of Engineers, Oklahoma, November 1980. The re-evaluation reaffirmed both the economic and technical feasibility of this project. Subsequently, as authorized by Public Law 99–662, a panel was formed to assess the improvement in water quality downstream of Area VIII to determine its consistency with the water quality estimated in the development of project benefits.

The panel submitted its report to the Secretary of the Army and the Committee on Environmental and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives in August 1988. The panel determined the operation of the completed works in Area VIII were consistent with the project benefits projected by Design Memorandum No. 25, and continues to perform beyond design expectations.

Current appropriations have initiated construction of the low flow dams and pump stations in Area VII and X, accelerated designs for the Crowell Brine Lake and brine detention reservoir, and pump stations and Salt Creek Lake in Area VI. With current construction underway, accelerated project designs and right of ways purchased, we request that Congress appropriate $14,000,000 for fiscal year 1994 for the Tulsa District COE to continue this work as well as initiation of final engineering and design at Areas VI, XIII, and XIV.

Red River bank stabilization, Index, AR, to Denison Dam.—Bank caving is not only a serious problem between Shreveport, Louisiana, and Index, Arkansas, but it continues upstream between Index, Arkansas, and Denison Dam, Texas. The Congress has appropriated a total of $1 million for the study of a comprehensive bank stabilization project in this reach of the river during the past three fiscal years. We urge the continuation of this preconstruction planning project recognizing that several years of planning are required before construction of this type project can begin. We hope that an orderly development up Red River can continue in the years ahead for the benefit of the people of Arkansas, Texas and Oklahoma bordering the Red River above Index, Arkansas. We are advised by the Tulsa District Corps of Engineers that they have sufficient funds in hand to complete the study, and therefore, no additional funds are requested.

Emergency bank stabilization.—The major flooding which occurred along the Red River in May 1990 caused considerable bank erosion, and there is the danger that a number of buildings and major infrastructure improvements will be lost because of the resulting bank caving. Several of these situations have been made known to the Corps of Engineers (Tulsa District) and they are taking the steps necessary to determine what treatments are needed. The Authority for the COE to undertake this work is included in Section 14 of the Flood Control Act of 1946, although the President's fiscal year 1992 budget does not provide funding for this work. The Red River Valley Association urges Congress to allocate the funds necessary to continue the work needed to control and stabilize these eroding banks which are endangering improvements, facilities and human life.

TEXAS PROJECTS

Appropriations resolutions

Red River navigation—Daingerfield, reach.—The Red River Navigation Project originally was recognized and should now be viewed as a whole project producing benefits for the entire region and nation. Piecemeal deauthorization of the project features associated with the Navigation Project, such as the Shreveport/Daingerfield Reach should not be allowed to occur. The Red River Valley Association supports the continuation of the authorization for the Shreveport Daingerfield Reach, and requests that $1.58 million be appropriated in fiscal year 1994 for the continuation of the following Studies and preconstruction planning:

(1) Economic—To take into consideration considerable additional tonnage that has been located and will greatly affect the benefit cost ratio. (2) Recreational—To determine the recreational benefits, which have never been truly considered, that would accrue to this Project; (3) Environmental—To give further consideration to alternate routing, and to determine the benefit to Caddo Lake of this Project; and the consequences to Caddo Lake if this Project is not constructed.

Cooper Lake and channels.—The Cooper Lake and Channels Project was authorized by the 84th Congress on August 3, 1955, for the construction, control, recreation and water supply benefits to the citizens of the area and the nation. The Corps of Engineers and three local entities, Sulphur River Municipal Water District, North Texas Municipal Water District and the City of Irving, have been attempting to build this project since its authorization. The project has been delayed since 1978 by litigation to modify the Environmental Impact Statement. That litigation has now been resolved. The Corps has made what it considers to be the required modifications on the Cooper Lake Project, which is desperately needed by the local participants for water supply, and by the City of Texarkana for replacement flood control storage in Lake Wright Patman. The Red River Valley Association recommends that the Congress continue funding the project in the amount of $10 million in fiscal year 1994 for continued construction and channels.

McGrath Creek project.—McGrath Creek is a tributary of Holliday Creek and drains approximately 5.6 square miles of highly urbanized watershed within the City of Wichita Falls. A flood control project for Holliday Creek is currently under construction by the Corps of Engineers. Damage in excess of $20 million occurred on the McGrath Creek Watershed during the flood of May of 1982. The City is pursuing federal assistance for McGrath Creek to alleviate the estimated $1.6 million per year of average flood damage which currently occurs. A project design memorandum outlining an $11,500,000 project has been issued by the Tulsa District, and the City of Wichita Falls is prepared to pay for required local match.

This project should be completed in a timely manner in order to provide protection to a large segment of highly urbanized land which carries an excellent benefit-to-cost ratio. The City Wichita Falls and Red River Valley Association strongly support the inclusion of $1,700,000 for a construction start in fiscal year 1994. Right-of-Way could be available by December, 1993 and we would support a start of construction in January of 1994. This January 1994 construction start is desirable in order to protect monies appropriated by the Texas State Legislature for part of the project.

Lake Wichita/Holliday Creek—Wichita Falls, TX.—A report recommending modification of the existing dam at Lake Wichita and channel improvements on Holliday Creek was approved by the Board of Engineers for Rivers and Harbors in January 1978. The project, authorized by the Water Resources Development Act of 1986, is now under construction. The President's budget for fiscal year 1992 included an allocation of $1 million for continued construction. Phase I & II are now complete. Phase III has had to be redesigned due to the Corps of Engineers initial design requiring the dam height to be PMF plus 3, although the national and Texas laws require only PMF. The bids the Corps received for Phase III significantly exceeded the cost the City of Wichita Falls had agreed to pay, and the Phase III project must now be re-designed in order to bring the dam in compliance with the national PMF standard. The Red River Valley Association believes that the Corps' erroneous insistence upon PMF +3 in their original design for Phase III is responsible for the need for a re-design, and urges that Congress maintain the $1 million allocation and also to require the Corps to provide the redesign of Phase III at no cost to the City of Wichita Falls.

Emergency bank stabilization.—The major flooding which occurred along the Red River in May 1990 caused considerable bank erosion, and there is the danger that a number of buildings and major infrastructure improvements will be lost because of the resulting bank caving. Several of these situations have been made known to the Corps of Engineers (Tulsa District) and they are taking the steps necessary to determine what treatments are needed. The Authority for the COE to undertake this work is included in Section 14 of the Flood Control Act of 1946, although the President's fiscal year 1994 budget may not provide funding for this work. The Red River Valley Association urges Congress to allocate the funds necessary to continue the work needed to control and stabilize these eroding banks which are endangering improvements, facilities and human life.

Bowie County levee.—Major flooding along the Red River in May 1990 severely tested the integrity of the Bowie County Levee located along the right bank of the Red River north of Texarkana, Texas. Had it not been for emergency measures taken by the U.S. Army Corps of Engineers and local interests, the levee would have been destroyed during the flood. It is the opinion of the Corps that the levee would fail if subjected to another flood of the magnitude encountered in May 1990. Replacement or restoration of the levee is necessary to protect approximately 7,000 acres of prime agricultural land as well as residential and farm structures. A reconnaissance study of the Bowie County Levee is currently underway by the Corps to determine if a feasibility study would be in the federal interest. The Red River Valley Association supports planning activities for the levee as part of comprehensive flood control measures along the Red River and requests full capability funding.

Crowell Brine Lake.—The start of construction on the Crowell Brine Lake as part of the Red River Basin Chloride Control Project is imperative in order to realize full utilization of surface water supplies as this portion of the Red River Basin is particularly short of usable water for municipal, industrial and agricultural uses. With the control of the natural salt pollution as proposed by the Corps of Engineers Ark-Red Chloride Control Program, this water can be used for the purposes mentioned above, and it is now time that construction on this site be started.

This project, which would additionally be very valuable as a flood control project, has been endorsed and supported by Wilbarger, Foard, Hardeman, Cottle and Childress counties and the Soil Conservation District serving these counties and the cities of Vernon, Quanah, Childress, Crowell and Paducah, as well as the Four Winds Foundation, consisting of Childress, Cottle, Hardeman and Foard counties, and the Four Winds RD&D, and many farm and civic organizations.

The Red River Valley Association supports the Pease River Reservoir Steering Committee in its request for construction to begin on the Crowell Brine Lake, and urges Congress to appropriate $14 million in fiscal year 1994 and instruct the Corps to begin construction on this and all other sites immediately.

FEDERAL LEGISLATION AND POLICIES

Non-Federal cost sharing

The Water Resources Omnibus Bill was signed into law by President Reagan on November 17, 1986. Non-federal cost share provisions set forth in this important piece of legislation include:

—Flood Control—25–50 percent, with a minimum of 5 percent cash up-front during construction.

—Hydropower—100 percent reimbursable.

—M&I Water Supply—100 percent up-front during construction or reimbursable with interest.

—Agriculture—35 percent up-front or reimbursable.

—Recreation—50 percent up-front or reimbursable.

—Fish and Wildlife Enhancement—0 percent for national benefits; 25 percent up-front or reimbursable if benefits are local.

Feasibility Level Studies—50 percent during the course of the study, with a minimum of 25 percent in cash—up to 25 percent may be provided in-kind. (Excludes inland navigation studies involving dams, locks and channels.)

Even though these and other cost-sharing provisions are generally outlined in the Omnibus Bill, there still remains substantial leeway for interpretation and formulation of guidelines. The Red River Valley Association highly recommends that the federal government solicit state and local input towards implementation of equitable and realistic cost-sharing guidelines.

National Environmental Policy Act

While recognizing the need and intent of the Congress in passing the National Environmental Policy Act of 1969, the Red River Valley Association also believes that the interpretation of this act has caused unnecessary economic hardship to the general public. The delay in start of projects beneficial to the general goodwill causes the real cost of the projects to increase significantly, often to the point that they no longer are economically beneficial.

The Red River Valley Association requests Congress to revise this Act to:

One. Streamline Administration procedures under the Act to speed up the time for completion and review of an Environmental Impact Statement in a Federal project.

Two. Recognize Man as a part of the environment and require that the effects upon Man be taken into account in the preparation and analysis of an Environmental Impact Statement.

Three. Require that any person, association or other entity contesting the adequacy of the Administration procedures in preparation and/or review of Environmental Impact Statements be required to post bond in evidence of financial responsibility to reimburse the constructing agency for cost of delay in the event that the Environmental Impact Statement and/or procedure appealed is found to be adequate, if not otherwise provided by existing law.

The membership of the Red River Valley Association is concerned about unwarranted delays that add additional cost to Red River Basin projects resulting in severe hardships on the citizens of the Red River Basin. The membership urges that Congress direct public officials and agencies to proceed with sound long-range development of the Red River Basin and its resources for the benefit of Arkansas, Louisiana, Oklahoma and Texas.

Rights-of-way responsibilities.—The Flood Control Act of 1946 provided for enlargement of existing levees and construction of certain authorized levees on Red River below Denison Dam. Language in the Act requires local interests to be responsible for all lands, easements and/or rights-of-way required for construction of the improvements. Levee districts and local governing bodies have found that the number of enlargements, setbacks and berms have progressively increased and rights-of-way costs have sharply increased, particularly in the past 10 years. Financial burdens resulting from increased costs for rights-of-way have steadily depleted limited revenues and funds of levee districts and local public bodies throughout the Basin area. The impact is so great that presently there are serious monetary problems and realistic doubt as to the abilities of various levee districts to continue to meet financial obligations.

The requirement of local interest to furnish all rights-of-way is not consistent with Congressional policy and is not compatible with other major river basin projects for flood control. It is obvious that modifications are drastically needed to correct these inadequacies.

The Red River Valley Association recommends Congress amend the 1946 Flood Control Act to permit Federal reimbursements to levee district and local governing bodies for fair market value of lands taken for all flood control purposes, including construction of new levees, levee setbacks, levee enlargement, levee turnovers, berms and cutoffs as necessary. Such modification is required at an early time to help relieve local levee districts and governing bodies of an extreme financial burden, and to assure progressive advancement of the flood control program in the Basin.

Uniform Relocation Assistance Act.—The Red River Basin Levee Districts and the Red River Waterway Commission are experiencing costs in the construction of navigation systems and construction and operation of flood control systems. The tax base of the basin lands is not capable of supporting additional tax loads to fund the relocation costs associated with levee setbacks, flood control works and navigation projects.

The Federal Government through Public Law 91–646, known as the Uniform Relocation Assistance Act, provides that these relocation costs are the responsibility of and must be borne by local interests. The requirements and guidelines established in this Act are such as to be extremely costly.

The Red River Valley Association requests the Congress to amend the Federal Uniform Relocation Assistance Act to provide for Federal payment of all such costs related to the construction of flood control and navigation projects in the Red River Basin of Arkansas, Louisiana, Oklahoma and Texas.

Maintenance of channel stabilization works.—Past experience on the Red River and many other river projects has shown conclusively that maintenance of channel stabilization works by local interests is impractical. Rapid changes in river conditions and alignment, such as occur frequently on Red River, demand drastic extensions and revisions of existing protective works, and, occasionally, required changes are so radical that relocations are necessary. Experienced personnel, special equipment and certain materials are not normally available from local interests when needed, and the costs of these items exceed the financial capabilities of local levee districts.

The Red River Valley Association recommends to Congress that the Corps of Engineers be authorized and directed to maintain all bank stabilization and channel training work on Red River.

Red River basin beneficial uses of salt water.—On September 23, 1982, the U.S. House of Representatives Committee on Public Works and Transportation adopted a resolution directing the Corps of Engineers to determine the feasibility of salt-gradient solar ponds and associated power generation equipment to collect and store solar energy and to generate electric power in the Red River Basin.

The inherent thermal storage capability of salt gradient solar ponds and the associated solar pond power plant concept offers a potentially viable alternative energy source which makes use of abundantly available natural resources (sun, salt, and land) and existing technology (i.e., heat exchanges and low temperature turbine generators). The necessary resources are readily available in the Red River Basin, particularly in western Texas and Oklahoma where there are identified sources of salt brine in economical quantities feasible for use in conjunction with solar ponds.

Limited scope reconnaissance studies performed in fiscal year 1984 by the Tulsa District of the Corps of Engineers indicate a strong likelihood that a system of solar pond power plants can be economically feasible when constructed in conjunction with the chloride control measures in the Red River Basin. The report recommends expanded reconnaissance studies be made in the basin. The Red River Valley Association supports the investigation and requests that the stated fiscal year 1989 capability level of the Corps of Engineers be appropriated at 100 percent Federal cost to continue these studies.

Changes during a Federal study.—During the phase of completing the General Design Memorandum for an authorized project, local interests, levee boards and the state governmental offices of primary interest should be kept advised of the study progress. In particular, any changes of the originally authorized plan as it may affect the project and/or the purpose of the project should be communicated to the local and state governments.

Cost of storage for municipal and industrial water.—Federal laws under which the multi-purpose Federal water projects were authorized, require purchases of any water supply or power to repay the Federal Government the full cost of providing such power or water, including interest on that cost at a rate the government paid to borrow long-term money in the year it built the project. This specific pricing mandate was established by the Water Supply Act of 1958.

Since 1976, the Secretary of Army has required construction costs escalated to present day levels using the Engineering News Record Construction Index effective at the beginning of the fiscal year in which the contract is approved, plus interest.

The Red River Valley Association requests Congress clarify the Secretary of Army's authority regarding water storage contracts and supports the concept of repayment to the Federal Government of original cost of construction plus interest only.

Regulating land use.—In the past, proposals have been offered in the U.S. Congress and in some state legislatures to regulate and control the use of privately owned lands without compensation to the owner. These "land use" bills have been recognized by these legislative branches of government as contrary to the Fifth Amendment of the Constitution of the United States and soundly defeated each time they were offered. The Red River Valley Association opposes this type of national land use legislation.

Mitigation lands.—The present interpretation held by the U.S. Fish and Wildlife Service in relation to "mitigation lands" for water conservation projects greatly hinders the development of water supplies, flood control and bank stabilization projects. This interpretation requires taking large amounts of lands out of private ownership for wildlife management purposes. This reduction in private land ownership represents a considerable economic and tax base loss. The Red River Valley Association, recognizing the need for a balance between the environmental aspects and people's needs, requests Congress to press for a revision of the present interpretation held by the U.S. Fish and Wildlife Service in order to make it compatible with Congressional intent and the needs of the people.

The Fish and Wildlife Service has undertaken efforts to utilize various alternative action programs such as fee acquisition, leasing, and easements for the purpose of a program to preserve bottom land habitats.

As part of this program, the Fish and Wildlife Service has identified specific bottom land hardwood areas in Texas and Oklahoma and has placed these areas into priority categories, with many of the areas so identified in direct conflict with identified and proposed water supply reservoir sites.

The Fish and Wildlife Service's Program could have serious adverse effects on the ability of water supply agencies to meet the future water needs of the people within their respective regional water supply areas, in that the program set a dangerous precedent that will permit anti-water development groups to use such tactics to preempt, or at least make very difficult, future water development projects. The Red River Valley Association, therefore, opposes the Fish and Wildlife Service's Bottom Land Hardwood Preservation Program.

Small watershed program.—The Red River Valley Association has long recognized the value of the Small Watershed Program (Public Law 566) for protecting and improving the soil and water resources of our nation. Resource improvement projects in small watersheds of less than 250,000 acres, as provided in Public Law 566, gives rural and small town America an effective tool to span the gap between large watershed resources improvement projects of the Corps of Engineers and small, individual projects, carried out by landowners and operators. Public Law 566 has become a well-known and respected program of federal, state and local partnership in resource improvement and protection of the Red River Valley. The Red River Valley Association supports the Small Watershed Program and urges its effectiveness be increased through appropriate increases in funding and personnel.

Federal reservoirs policy.—Federal reservoirs represent a combination of large economic investments and commitments of valuable natural resources which can make great contributions to the nation's economy. The Water Supply Act of 1958 provides a policy for non-Federal payment of water supply costs at federal reservoirs, both for participants at the time of project construction and for those who purchase reallocated storage at a later time. The payment required has been based on a simple principle: new water supply participants should pay for reallocated water supplies as they would have paid if they had been water supply participants when the project was built. This historic policy has achieved two goals: it has prevented "free riders" from receiving water supply benefits that they did not pay for, and it has facilitated reallocation of water to purposes with higher economic benefits.

In recent years, the Federal government has developed a new policy for payment of reallocated water supplies, charging the highest of the following: benefits or revenues foregone, replacement costs, or updated cost of storage in the Federal project. Under this new policy, the federal government has in several cases sought repayment of "updated costs" of storage among the new mix of project purposes. Non-Federal participants are asked to pay an inflated cost, increased to reflect present cost levels instead of original cost of construction, plus interest at the rate in effect at the time of reallocation, as opposed to the interest rate at the time of the project's construction. This new federal policy has been established by agency initiatives, rather than by Congressional action, and has not been applied consistently across the nation.

The Red River Valley Association requests Congress to enact legislation making it clear that the water supply repayment policy in the Water Supply Act of 1958 applies to reallocated water supply storage. The Red River Valley Association also requests that Congress further stipulate that in considering reallocation of storage space at federal reservoirs, federal agencies should strictly respect state water law and state water law management responsibilities, and in all studies and decisions related to reallocation, federal agencies should be required to, consult with all affected states and follow applicable state laws on water rights and water quality.

STATEMENT OF CADDO-BOSSIER PARISHES PORT COMMISSION

On behalf of the citizens of Northwest Louisiana, the Caddo-Bossier Parishes Port Commission strongly urges the Congress of the United States to allocate $135 million for the Red River Navigation Project for fiscal year 1993–94.

Since 1985, the Caddo-Bossier Port Commission has secured U.S. Customs Port of Entry, Foreign Trade Zone 145 designation and FTZ Subzone 145A for our local AT&T manufacturing operation for the Caddo-Bossier Parishes area in preparation of the return of navigation to this area. The $3 million Intermodal Freight Container Handling Facility, funded with state funds of $2.0 million and a $1.0 million EDA Grant to complement the public port facility, is operational to coincide with the completion of the Red River Navigation Project to the Shreveport-Bossier area and since July 1992 has increased commodity traffic one-hundred (100%) percent.

In preparation for the return of navigation, the Caddo-Bossier Port Commission has secured 1,400 acres for a public port and industrial park complex south of the city limits of Shreveport at a cost of $5,165,484 and is in the process of acquiring additional lands with our goal being a 2,000 acre Port Complex.

Our 1990 Master Plan Update verified the need for a public port in this area to handle a variety of commodities such as grains, chemicals, petroleum products, raw steel, ores, wood pulp, finished wood products, agricultural products and other finished and unfinished manufactured goods. Many of the companies surveyed as part of this study indicated that the availability of water transportation will be critical to their future prosperity as transportation costs to and from this area are high and adversely impact their ability to sell their goods competitively, particularly insofar as foreign markets are concerned.

The initial development of our public Port Complex has been secured by a $3.8 million loan from the Red River Waterway Commission local tax generated funds, grant award for $1.0 million from the Economic Development Administration and a grant for $2,250,940 from the Port Priority Development Program funded from the State gas tax. Initial infrastructure includes 600 LF general cargo wharf, petroleum wharf, roads, rail and basic utilities. Total funds needed for the Port Commission to complete initial phases of the Port Complex approximate an $8.5 million investment. We began construction in June 1992 and will hopefully be completed prior to 1995 when the navigation project is complete to Shreveport-Bossier City.

With the advent of riverboat gambling vessels on the Red River investing upwards to $100 million privately and creating potentially 2,500 jobs, consideration should be given to completing the navigation project to Twelve Mile Bayou, Mile 283.5, as authorized by the River and Harbor Act of 1968 and Water Resources Development Act of 1976. If economic justification is required, timing would be now to take a close look at what was originally authorized.

For nearly 30 years, the Caddo-Bossier Port Commission has been involved in planning for the day Red River navigation returns to this area. Much time and effort on the part of thousands of community citizens and businesses have been involved in our activities. Under current Congressional allocations, the Red River Navigation Project was scheduled to be completed to the Shreveport-Bossier City area by 1995. It would be a major tragedy for our communities if the U.S. Congress, at this late date, does not see fit to enable this project to be completed in a timely fashion, particularly with the job-generating capabilities and cost benefit ratios being so advantageous. Therefore, we urge the Congress to ensure that the project will be completed by authorizing a minimum of $135 million for Fiscal Year 1993–94 for the Red River Navigation Project, under the capabilities of the U.S. Corps of Engineers. Your support will mean so much to both the local and national economies. After so much previous investment, now is not a time to not fulfill a commitment to see this project through to a successful conclusion.

Mr. STROUD. I would like to present Tom Newsham, the executive director of the Red River Valley Association, his second appearance here in that capacity. He will introduce the presenters.

Thank you, Mr. Chairman.

Mr. NEWSHAM. Thank you, John.

Good morning, Mr. Chairman. Thank you for allowing us to be here this morning.

I am certainly thrilled to be here and hope we make many more appearances. With your permission, though, and in view that we have a short time here, I would like to get right to the various individuals are going to talk this morning.

First, I would like to introduce Mr. William C. (Bill) Chapman. He is our vice president for Oklahoma. Mr. Chapman is a rancher and an attorney from Ardmore, OK.

Bill.

STATEMENT OF WILLIAM CHAPMAN, VICE PRESIDENT, OKLAHOMA, RED RIVER VALLEY ASSOCIATION

Mr. CHAPMAN. Thank you, Mr. Chairman.

I am William Chapman. I have submitted written testimony, so I will not go into detail on that.

We appreciate very much your patience in rehearing us each year.

The first point that I would like to cover will be covered in more detail by others on the panel, and that concerns the J. Bennett Johnston Waterway to the Shreveport-Bossier area. We are 100 percent in favor of that and want you to know that we endorse that wholeheartedly.

RED RIVER LEVEE AND BANK STABILIZATION BELOW DENISON DAM

There are two projects that I would like to address briefly. First is bank stabilization and levees below Denison Dam. The Federal Government and the States, and, in fact, the individual farmers throughout the United States spend quite a bit of money and time concerning highly erodible land, and I think this falls in that category.

And I think it is something that we need to address as well, because while we are protecting our individual fields and places, when you get to the Red River bank, it becomes an investment so large that the individual farmer cannot address this.

It needs to be addressed as part of the Red River navigation project, because it, indeed, protects the navigation sources on downstream. So it is vital to us, and we are recommending expenditure of $3 million in fiscal year 1994 for that purpose.

RED RIVER CHLORIDE CONTROL PROJECT

The other project that I would like to address concerns the Red River chloride project. As you are aware, in 1957, there was a comprehensive study made by the Federal Government, one of its agencies, and it found—and as a result, Oklahoma, Texas, and the Federal Government agreed to address the chloride project into the Red River, each of the States taking on the responsibility of correcting manmade pollution, primarily of an oil nature, oil field nature, and they did this, and have corrected the situation in the vicinity of 99-plus percent removal of those chlorides.

The Federal Government promised to take up the problem of natural pollution. This project you have addressed and has been underway, but has quite a bit further to go. At the current time, there is the equivalent of 94 train carloads of salts a day being dumped, or coming down the river, in essence, being dumped into Lake Texhoma from the natural salt sources in the upper Red, primarily in Texas and Oklahoma.

Senator JOHNSTON. How many of those salt sources are there altogether?

Mr. CHAPMAN. Well, there are actually probably 10 or so, but there are 8 principal ones that we have addressed. The Federal Government has basically corrected, I think, 3 of those, and we are asking for attention toward the additional 8, but—well, that would make 11, would it not?

But, actually, the primary concern is about six, and this time the Corps, I think, has addressed itself to three principal ones, and that is to what we are really addressing ourselves.

One of those is in Oklahoma, which is what I am concerned with, but that one is the single largest source, contributing about one-third of the salt coming down the river. But the Corps has continued to study this and has now reached the finishing of its study, I understand. And it meets the cost-benefit ratio under the 8½-percent interest rate that was required in the study. So it has proved to be cost efficient.

I might point out that once these are corrected, it is going to require something like somewhere from 8 to 20 years for the salt to flush itself out of that system. Of course, it will be a gradual process, but it will take several years.

So it is not the type of thing that as soon as that is turned off that it is going to readily make the water clean. But this will enable the water to be used in the Red River from municipal, industrial, and agricultural purposes to a much greater extent than it is now. It is very slightly used now, because of the——

Senator JOHNSTON. Do you mean that just that one project will make it——

Mr. CHAPMAN. No, sir. No; the Oklahoma, plus the other three projects, which are areas—six, eight, and nine are the three that we are addressing. Six is the one in Oklahoma.

But the other two sources in Texas, I think, are quite large projects as well. They are addressed a little differently than the one in Oklahoma. I think that is probably in your papers.

FUNDING REQUEST

I will not go into those in detail, but that would necessitate, and what we are asking is for Congress to appropriate $14 million in fiscal year 1994 for the Tulsa District and the U.S. Corps of Engineers.

I might point out that these type of projects provide a lot of additional employment that, hopefully, would fall within the President's employment program. They are projects where people could be put to work very quickly.

We appreciate your time and would urge your investigation, and, hopefully, your approval on these projects.

Senator JOHNSTON. You say if we get four of these primary sources cleaned up, they will be able to use it for industrial and agricultural purposes.

Mr. CHAPMAN. I think it will take, eventually it should take all the projects. There are three principal ones that are on the table at this point, areas six, eight, and nine. And that will greatly improve it, I think. Probably there are a couple more that will require some future attention, but this will greatly alleviate the problem.

Senator JOHNSTON. When will they be able to use that for the municipal water supply?

Mr. CHAPMAN. Well, I think it varies at the position up and down the river, because the further down the river, there is more fresh water coming into dilute the salt source. Out of Lake Texhoma itself, it is going to take a longer—well, it is actually being used now in the Dallas area.

But it has to be diluted with other waters to be used, so that the pipes do not rust out. I think Texas may address this, but I think they have to mix it maybe two-thirds to one-third, something like that, in order to use the water now. But this would alleviate that over a period of time.

Senator JOHNSTON. Fresh water is going to be a more and more important need in the Red River Valley and we will give that a high priority.

Mr. CHAPMAN. Thank you.

Mr. NEWSHAM. Mr. Chairman, to tie that a little bit into what Texas is going to say, there are actually 15 sources where chloride get into the Red River in Texas and Oklahoma. There are 10 projects that the Tulsa District designed to address the problem. There are about five different types of projects.

As each lock and dam is built and the pool is developed behind those dams, and you have a sedimentation of the salts, the water will start clearing up. And as you complete a project upstream and fewer and fewer chlorides go into the river, the water will start to be improved as you go downstream. So it is going to be a gradual thing over time, as Mr. Chapman said. It is not going to just happen overnight.

If we can get the funding that we are asking for this year to start the other projects, then we will be well on our way, in a reasonable amount of time, and I think something like over the next 10 years, to finish this entire project, and make the Red River almost salt free.

Sir, I would like to next introduce a brand new member that is going to testify today. He is our new vice president from Texas, Mr. Jimmy Banks, general manager of the Wichita Falls Water Improvement District No. 2.

Mr. Banks.

STATEMENT OF JIMMY BANKS, VICE PRESIDENT FROM TEXAS, RED RIVER VALLEY ASSOCIATION

Mr. BANKS. Mr. Chairman, I am Jimmy Banks. As Tom said, I am general manager of Wichita County Water Improvement District No. 2, in Wichita Falls.

RED RIVER WATERWAY, SHREVEPORT, LA, TO DANGERFIELD, TX

First, I would like to express my support for all the projects that the Red River Valley Association presented here today, as all projects are a benefit to this Nation. The completion of locks and dams 4 and 5 will bring navigation to the Shreveport-Bossier City, LA, area.

With the necessary development of public and private facilities, navigation will not only benefit Texas, Oklahoma, Arkansas, and Louisiana, but the Nation as a whole.

We should look further now to the Shreveport/Dangerfield reach, and continue studies to take into consideration additional tonnage that has been located, determine recreational benefits, give further consideration to alternate routing, and determine benefits or consequences to Caddo Lake if this project is not constructed. We ask that $1.58 million be appropriated to continue this study.

LAKE WICHITA, HOLIDAY CREEK FLOOD CONTROL PROJECT, TEXAS

The Lake Wichita, Holliday Creek project is in the final construction phase; however, there is a need to continue work on McGrath Creek, a tributary of Holliday Creek. An average of $1.6 million flood damage occurs each year here.

An $11.5 million memorandum has been issued by the Tulsa District and the City of Wichita Falls is prepared to pay the local match.

This project should be completed in a timely manner in order to provide protection to a large segment of highly urbanized land, which carries an excellent benefit-to-cost ratio.

Rights-of-way could be available in December 1993. The Red River Valley Association strongly supports the inclusion of $1.7 million for a construction start in fiscal year 1994.

COOPER LAKE AND CHANNELS, TEXAS

The Cooper Lake and channels project was delayed many years in litigation to modify the environmental impact statement. After 15 years of delay, this project is almost complete and the local sponsors are building necessary pump stations and pipe lines to put this water conservation storage to use.

Funds needed now are essential to complete the recreational facilities and land mitigation. We request $10 million to complete this project.

The Bowie County levee located along the right of the Red River, north of Texarkana, TX, could have failed had emergency measures not been taken. This levee protects prime farmland and residential areas. Another flood could completely destroy the levee. The Red River Valley Association supports full funding for planning on flood control measures along the river.

RED RIVER CHLORIDE CONTROL PROJECT

The Red River Basin Chloride Control Project has been subjected to almost every technical and economical evaluation conceivable and has returned a strong benefit-to-cost ratio in each case. The chloride project has repeatedly demonstrated its effectiveness beyond design expectations with each phase of implementation.

The above average benefit-to-cost ratio for fiscal year 1993 is 1.3 to 1, based on the current interest rate of 8½ percent. A report required by section 1107 of Public Law 99–662 on the effectiveness of the operation and benefits of area 8 has been submitted to Congress, and this shows that area 8 exceeds the design projections.

Additionally, the chloride project will provide the greatest environmental benefit in that it will reclaim one of the Nation's largest natural resources, the Red River, and prevent the destruction of thousands of acres of natural wildlife habitat by constructing new manmade reservoirs.

This project is not only environmentally sound, but, as in the President's plan, will create immediate needed jobs to carry on the stability of this Nation.

Current appropriations have permitted construction of the low-flow dam and pump station at area 10 in King County, TX, and other features of area 10 in conjunction with final design plans for area 7, area 9, and Crowell Brine Lake.

The Red River Valley Association requests $14 million in fiscal year 1994 for the Red River chloride project to continue engineering and initiate real estate acquisition and construction in area 7, area 9, and Crowell Brine Lake, and to initiate final engineering and design at area 6, area 13, and area 14.

We appreciate this committee's time and effort to consider the requests presented here today. Projects funded by you live on to be a sound investment in America.

Thank you.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF JIMMY BANKS

Mr. Chairman and Committee Members; my name is Jimmy Banks. I am Vice-President, Texas, of the Red River Valley Association. I am employed as General Manager of the Wichita County Water Improvement District No. 2. My brief oral comments are supported with a written statement. First I would like to express my support for all of the Red River Valley Association requests presented here today as all projects are a benefit to this nation.

The completion of Locks and Dams 4 and 5 will bring navigation to Shreveport-Bossier City, Louisiana. With the necessary development of public and private facilities, navigation will not only benefit Texas, Oklahoma, Arkansas and Louisiana, but the nation as a whole. We should look further now to the Shreveport/Dangerfield Reach and continue studies to take into consideration additional tonnage that has been located; determine recreational benefits; give further consideration to alternate routing; and determine benefits or consequences to Caddo Lake if this Project is not constructed. We ask that 1.58 million dollars be appropriated to continue this study.

The Lake Wichita Holliday Creek Project is in the final construction phase; however, there is a need to continue work on McGrath Creek, a tributary of Holliday Creek. An average 1.6 million dollar flood damage occurs each year. An 11.5 million dollar memorandum has been issued by the Tulsa District, and the City of Wichita Falls, is prepared to pay the required local match.

This project should be completed in a timely manner in order to provide protection to a large segment of highly urbanized land which carries an excellent benefit-to-cost ratio. Right-of-way could be available in December 1993. The Red River Valley Association strongly supports the inclusion of 1.7 million dollars for a construction start in fiscal year 1994.

The Cooper Lake and Channels Project was decayed many years in litigation to modify the Environmental Impact Statement. After 15 years of delay, the Corps has almost completed the new construction and local sponsors are building necessary pump stations and pipe lines to put the water conservation storage to use. As we have consistently stated, Cooper Lake will be used. Funds needed now are essential to complete recreational facilities and land mitigation. The Red River Valley Association request 10 million dollars to complete this project.

The Bowie County Levee located along the right of the Red River north of Texarkana, Texas could have failed had emergency measures not been taken. This levee protects prime farm land and residential areas. Another flood could destroy the levee. The Red River Valley Association supports full funding for planning on flood control measures along the Red River.

The Red River Basin Chloride Control Project has been subjected to almost every technical and economical evaluation conceivable and has returned a strong benefit-to-cost ratio in each case. The Chloride Project has repeatedly demonstrated its effectiveness beyond design expectations with each phase of implementation. The above average benefit-to-cost ratio for fiscal year 1993 is 1.3:1 based on current interest rate of 8.5 percent. A report required by section 1107 of Public Law 99–662 on the effectiveness of the operation and benefits of Area VIII has been submitted to the Congress and shows the Area VIII exceeds design projections.

Additionally, the Chloride Project will provide the greatest environmental benefit in that it will reclaim one of the nation's largest natural resources (the Red River) and prevent the destruction of thousands of acres of natural wildlife habitat by new man-made reservoirs. This project is not only environmentally sound, but, as in the President's Plan, will create immediate needed jobs to carry on the stability of this nation.

Current appropriations have permitted construction of the low flow dam and pump station at Area X in King County, Texas and other features at Area X in conjunction with final design plans for Areas VII, IX and Crowell Brine Lake. Construction of Area X is currently underway.

The Red River Valley Association request 14 million dollars in fiscal year 1994 for the Red River Chloride Project to continue engineering and initiate real estate acquisition and construction of Area VII, Area IX and Crowell Brine Lake, and to imitate final engineering and design at Areas VI, XIII and XIV.

We appreciate this committee's time and effort to consider the requests presented here today. Projects funded by you live on to be a sound investment in America. Your work makes this a better place to live.

Thank you.

RED RIVER WATERWAY PROJECT

STATEMENT OF ALBIN PROVOSTY, COMMISSIONER, RED RIVER WATERWAY COMMISSION

Mr. NEWSHAM. Mr. Chairman, I would like to next introduce Mr. Albin Provosty, commissioner, Red River Waterway Commission. He is also an attorney from Alexandria, LA.

Mr. PROVOSTY. Good morning, Mr. Chairman.

On behalf of the State of Louisiana and the Red River Waterway District, it is a distinct privilege and honor for me to address the members of the Appropriations subcommittee on behalf of the Red River navigation project.

It is difficult to believe that the 1994 appropriations could be the last major funding cycle needed to complete navigation to the Shreveport/Bossier City area and thus make the J. Bennett Johnston Waterway a reality.

Foremost among our goals is the completion of locks and dams Nos. 4 and 5 on schedule. If successful, the long-term goal to utilize the vast economic value and growth potential of the waterway project will be at hand.

As a local sponsor of the project, the Red River Waterway Commission remains committed to its responsibilities. We continue to acquire land, develop recreation areas, and nurture port developments and potential industrial users with the approach that the project completion of this reach is within our grasp.

Louisiana wants to continue supportive efforts on behalf of this project so that the end result will be jobs for our people through development of the river. Our dedication to this project remains as strong now as it was upon inception 25 years ago.

If we are to complete our mission to provide invaluable infrastructure to our Nation, funding must be made available. Thus, we respectfully request that the committee approve our final major request of the $135 million funding level for the Red River Waterway navigation project.

It would be a travesty to taxpayers to lose the momentum we have gained through hard work and perseverance. The sponsors of the Red River Waterway project are anxious to proceed to the completion of this reach.

With the entire project nearly 75-percent complete, we need to press harder than ever to achieve our goal of reaching the Shreveport/Bossier City area by the end of 1994.

With continued full project funding, completion of locks and dam Nos. 4 and 5 can be achieved with realignment, revetments, and recreational development continuing on schedule.

PROJECT MITIGATION FEATURES

The Red River mitigation project has received partial funding as well as 12,000 additional acres to offset construction damage. We urge continued funding of the mitigation portion of the project.

We also request a change in payment regimes and flexibility on site selections that reflect the change in land availability in our State since the early eighties.

The support of our neighbors—Arkansas, Oklahoma, and Texas—along with the various projects of the Red River Valley Association, continue to be important to us. We pledge our continued efforts on behalf of the Red River Valley basin projects which contribute to the areas's potential economic growth.

Included in the basin projects are much needed flood control measures. We further request continued support for most important projects, such as the Aloha-Rigloette project, and other drainage improvements in the valley. The Red River Waterway Commission is in unanimous support of all valley projects.

The Red River Waterway Commission and the people of the State of Louisiana wish to thank the Appropriations Subcommittee on Energy and Water Development for the long-standing support exhibited in the past.

In conclusion, the Red River Waterway project has always received strong endorsement from this committee, and now, more than ever, Mr. Chairman, your support is needed in order to complete the project on schedule.

The opportunity to address this committee is appreciated very much.

Senator JOHNSTON. Thank you very much, Albin.

[The statement follows:]

STATEMENT OF ALBIN PROVOSTY

On behalf of the State of Louisiana and the Red River Waterway District, it is my great honor to address the members of the Appropriations Subcommittee on the Red River Navigation Project. It is difficult to believe that the 1994 Appropriations could be the last major funding cycle needed to complete navigation to the Shreveport/Bossier City area. Foremost among our goals is the completion of Lock and Dam Nos. 4 and 5 on schedule. If successful, the long term goal to utilize the vast economic value and growth potential of the Waterway Project is at hand. As the local sponsor of the project, the Red River Waterway Commission remains committed to its responsibilities. We continue to acquire land, develop recreation areas and nurture port developments and potential industrial users with the approach that the project completion of this reach is within our grasp. Louisiana wants to continue supportive efforts on behalf of this project so that the end result will be jobs for our people through development of the river. Our dedication to this project remains as strong now as it was upon inception twenty-five years ago. Louisiana and its neighbors need the Red River Navigation Project to fuel a recovery effort in our region to pull us out of a struggling economy.

If we are to complete our mission to provide invaluable infrastructure to our nation, funding must be made available. We humbly implore that the Committee approve our final major request of the $135,000,000.00 funding level for the Red River Waterway Navigation Project. Our new President faces gigantic challenges in these early days of his administration. We must all strive to work together to facilitate a national recovery. However, funding levels of this magnitude are critical for completion of this navigation project and will allow progress and benefits of the project to start accruing quickly. It would be a travesty to the taxpayers to lose the momentum we have gained through hard work and perseverance. The sponsors of the Red River Waterway Project are anxious to proceed to completion of this reach. With the entire project nearly seventy-five percent complete, we need to press harder than ever to achieve our goal of reaching the Shreveport/Bossier City area by the end of 1994. With continued full project funding, completion of Lock and Dam Nos. 4 and 5 can be achieved with realignments, revetments and recreational development continuing on schedule. The Red River Mitigation Project has received partial funding as well as 12,000 additional acres to offset construction damage. We urge continued funding of the mitigation portion of the project. We also request a change in payment regimes and flexibility on site selections that reflect the change in land availability in our state since the early eighties.

The support of our neighbors, Arkansas, Oklahoma and Texas, along with the various projects of the Red River Valley Association continue to be important to us. We pledge continued efforts on behalf of the Red River Valley basin projects which contribute to the area's potential economic growth. Included in the basin projects are much needed flood control measures. We further request continued support for most important projects such as the Chloride and Aloha-Rigolette Projects, and other drainage improvements in the valley. The Red River Waterway Commission is in unanimous support of all valley projects. The Red River Waterway Commission and the people of the State of Louisiana wish to thank the Appropriations Subcommittees on Energy and Water Development for the long standing support exhibited in the past.

In conclusion, the Red River Waterway Project has always received strong endorsement from this Committee and now, more than ever, your support is needed in order to complete the project on schedule. The opportunity to address this Committee is very much appreciated.

Senator JOHNSTON. As you know, I continue to be deeply and strongly committed to getting this project completed, particularly as it relates to navigation to the Shreveport/Bossier area in late 1994.

The Corps will need $135 million to accomplish that. We are waiting day by day for the administration's budget request to see whether they want to be part of our waterway, or whether they want to make us do it again over their objection. But whichever way it is, we have to get it done and we have to find a way.

To have gone through all those tough years, when we were down on the lower reaches, trying to build locks and dams 1, 2, and then 3, and now we are most of the way through with the funding, we are about 60-percent funded on locks and dams 4 and 5, not to complete to Shreveport would just be silly. I do not intend to be silly on that issue. [Laughter.]

We will find a way to do it. By the way, we continue to be committed to the Port of Alexandria. These are good projects. We hope to be successful with those this year.

Mr. NEWSHAM. Mr. Chairman, we appreciate it. Those are encouraging remarks.

To complete our testimony, I would like to reintroduce our president, Mr. John Stroud, who is an attorney from Texarkana, AR, and will give the Arkansas testimony.

STATEMENT OF JOHN STROUD, PRESIDENT, RED RIVER VALLEY ASSOCIATION

Mr. STROUD. Mr. Chairman, I cannot tell you what the President will have for the Red River in his budget, but I can tell you in the years he served as Governor he supported the Red River each biennium of the legislature and appropriations to what we call the Red River Waterway trust fund, which received non-Federal costs.

Senator JOHNSTON. As an original FOB, you might put a bug in his ear. [Laugher.]

Mr. STROUD. But we think he will support the Red River on up.

Mr. Chairman, there are two specific items in Arkansas. Let me say, our written testimony addresses some others for which we are not needing nor requesting funding. Those are important.

We wanted to keep them here in front of you, basically, in Little River County and above Index, AR, which is the Arkansas-Texas boundary. You will recall that is where the Red River gets 8 miles wide, but that is pending for some cost-sharing agreements and other things.

RED RIVER EMERGENCY BANK PROTECTION, ARKANSAS

There are two that involve appropriations, and let me say one of those is unusual. Last year, Arkansas came away from the House with a goose egg for the first time in the 26 years that I have been here.

Our Congressman was very busy downstate and did not get a written testimony in. You reinserted our two projects here, but in the conference committee, one of them left off the tag for which it was to be spent.

You appropriated $3.5 million for Finn revetment, the continuation of revetments in Arkansas that's been going on over 20 years. Somehow at the conference committee, the $3.5 million of emergency bank protection funds was appropriated, but the words "Finn revetment" were not there.

The Corps still has that money. It is a pleasure to not ask you for more money, but to ask you to go put the tag on it. And they assure me that just language in the appropriation bill that says that last year's $3.5 million for thin revetment will do it.

They are acquiring rights-of-way now, feeling comfortable and hopeful that you will do that, so they can go immediately to contract next fall.

Senator JOHNSTON. Language is a lot easier than money.

RED RIVER LEVEES AND BANK STABILIZATION BELOW DENISON DAM

Mr. STROUD. It was a pleasant diversion from the typical request. So really we have one request for dollars. Last year you began a funding of levee rehabilitation, and that is going on now, the first contract, actually, that will be let probably in May or June.

This is a place near Texarkana where the levee almost failed, one of the more critical spots. We are asking $3 million to continue at the locations that the Corps determines to be critical.

As you know, in Arkansas, the levees held, but it was severely tested. As a part of this, the levees will be built to conform to their design standards, with a more gentle slope, easier to maintain and bush-hog, and where traffic can travel on a levee, to spot the weak places.

In our flood of May 1990, the only thing passable was a three-wheeler or a four-wheeler, it was so slippery and narrow. But those two items are what Arkansas specifically asks.

If I could make one general comment, and that is, for the last several years the Corps' capability has been shrouded in secrecy to begin with. It is doubly difficult when they follow us, rather than precede us.

We simply ask the committee, as the Lower Mississippi Valley Association did, to take a look at that, and we get a little more information when we follow them, and we need all we can get.

We appreciate the opportunity of being here, Mr. Chairman.

Senator JOHNSTON. Thank you, Mr. Stroud. I appreciate you and all the testimony from the Red River Valley Association. I hope we will have great news for you in just a few more weeks.

Mr. STROUD. Thank you, sir.

[The statement follows:]

STATEMENT OF JOHN F. STROUD, JR.

Red River Emergency Bank Protection (Louisiana, Oklahoma, Arkansas and Texas); $3,500,000 was appropriated for fiscal year 1993 but failed in the Conference Report to specifically provide for its use to construct Finn Revetment. We request that previously appropriated funds be now authorized and directed for the construction of Finn Revetment Funds requested for fiscal year 1994	$3,500,000
Red River Levees and Bank Stabilization Below Denison Dam (Texas, Arkansas and Louisiana). Funds requested for fiscal year 1994	3,500,000
Completion of engineering study to prioritize locations for reshaping and rehabilitating deficient levees in Arkansas	500,000
Authorize and direct the continuation of the rehabilitation of deficient levees in Arkansas	3,000,000
Red River Bank Stabilization, Index, Arkansas, to Denison Dam, Texas (Arkansas, Oklahoma and Texas) to complete feasibility study in Little River County, Arkansas, for modification of existing levees and construction of new levees. Funds requested for fiscal year 1994	
Little River County Study—feasibility study for levee construction and modification. Funds requested for fiscal year 1994	
Red River Waterway, Mississippi River to Shreveport, Louisiana—to complete construction of Lock and Dams No. 4 and 5. Funds requested for fiscal year 1994	135,000,000
Red River Basin Chloride Control Project to continue construction of projects at three locations and initiate final design at three other locations. Funds requested for fiscal year 1994	14,000,000

GENERAL STATEMENT

As attorney for the Red River Commission of Arkansas, I wish to thank the members of this Committee for the opportunity to again express the concerns, needs and priorities of funding vitally needed from the Congress—to continue the orderly development of the Red River Valley in Southwest Arkansas.

Twenty-six years ago, the bank caving in Southwest Arkansas accelerated to such an extent that the levee boards in that area banned together to form an association to present testimony to the Congress with a united voice. At that time, some of the upstream dams in Arkansas and Oklahoma had been completed which substantially alleviated the threat of floods, but which rapidly accelerated the bank caving due to the river remaining at one-half to two-thirds bank full for long periods of time. Since that time, upstream dams known as Millwood, Gillham, Dierks and DeQueen have been completed which have further reduced the threat of flooding, but which have accelerated the bank caving even more.

The State of Arkansas became concerned at this rapid irreparable loss of the most fertile farmland in Southwest Arkansas and recognized that bank stabilization could be a prelude to navigation into Southwest Arkansas. Therefore, twenty years ago the Arkansas General Assembly created the Red River Commission upon the recommendation of Governor Dale Bumpers, now the Senior United States Senator for the State of Arkansas. The Commission was vested with the authority to furnish the local cooperation necessary for the construction and study of projects and to coordinate with the Corps of Engineers and the Congress to develop the water resources of the Red River in Arkansas. Southwest Arkansas is fortunate to have an abundance of water, rich soil and timber resources, but we vitally need the assistance of Congress to continue the bank stabilization projects for the preservation of these natural resources.

Following the disastrous flood of May 1990, there can be no doubt of the importance of properly maintained levees and of bank stabilization. All areas not protected-by properly maintained levees were flooded and the only protection from enormous bank caving was where revetment projects had been constructed by the Corps of Engineers.

Red River emergency bank protection (Louisiana, Oklahoma, Arkansas and Texas).—The most important need for funding under this program in Arkansas is for the construction of Finn Revetment. Congress appropriated $3.5 million for this fiscal year of Emergency Bank Protection Funds. The Senate Bill specifically indicated the funds were to be used for the construction of Finn Revetment, but the conference Committee Report erroneously approved the appropriations, but omitted the language. Continued neglect of the caving banks in Arkansas will substantially worsen alignment of the river, making future realignment for navigation and stabilization more costly and difficult and will erode the remaining works resulting in a waste of the original construction funds. Many caving banks still have an existing alignment that is usable for the navigation channel when it is authorized, and those banks should be preserved now.

The Finn Revetment should be initiated to stop the loss of valuable farmland and to stop the transfer of large quantities of sediment to the navigation system downstream. This reach of the river has been identified as having the most severe bank caving.

We urge that the $3.5 million appropriated but not allocated or spent be now allocated for this project or, in the alternative, we urge the appropriation of funds for the Emergency Bank Protection program in the amount of $3.5 million for FY 1994 for construction of Finn Revetment, and that such sum remain available until expended for such construction.

Red River levees and bank stabilization below Denison Dam.—The Corps of Engineers indicated a few years ago that the levees along the main stem of the Red River in Arkansas required reshaping to conform to current design standards. Funding is needed to allow the Corps of Engineers to determine the deficiencies in the project levees in Arkansas that are a matter of grave concern to the levee districts, and to continue detailed design for construction of remedial measures. The levees were severely tested by the May 1990 flood, and it is apparent that reshaping is needed to allow vehicular traffic on top of the levees for inspection during a flood and to allow more comprehensive maintenance to be accomplished by having a more gentle slope on both sides of the levee which will also increase their integrity. The Red River Valley Association joins the Arkansas Red River Commission in urging Congress to appropriate the sum of $500,000 to complete an engineering study of the levees on the Red River within the State of Arkansas from Index, AR to the Louisiana State Line.

This study began during fiscal year 1992 from a previous appropriation. The study should establish and prioritize locations of the levees that have deficient side slopes and crown widths. The Corps of Engineers should prepare and submit the construction plan to reshape and rehabilitate the levees that are found to have deficient grades, slopes and crowns. This report should include the associated construction costs for all identified areas and should be completed in fiscal year 1994. The Corps of Engineers is preparing to let a contract this fiscal year from funds appropriated by the last Congress to rehabilitate 2.4 miles of the levee beginning at the Arkansas-Texas boundary and extending downstream on the right descending bank of Red River. The association urges that $3 million be also appropriated to continue the levee rehabilitation downstream in Miller County, Arkansas from the 2.4 mile point to the intersection of the levee with US Highway 67.

Red River bank stabilization, Index, AR to Denison Dam.—Bank caving is not only a serious problem between Shreveport, Louisiana, and Index, Arkansas, but it continues upstream between Index, Arkansas, and Denison Dam, Texas. The Congress has appropriated money for the study of a comprehensive bank stabilization project in that reach of the river during the past three fiscal years. We urge the continuation of this preconstruction planning project recognizing that several years of planning are required before construction of this type project can begin. We hope that an orderly development up Red River can continue in the years ahead for the benefit of the people of Arkansas, Texas and Oklahoma bordering the Red River above Index, Arkansas. We are advised by the Tulsa District of the Corps of Engineers that they have sufficient funds in hand to complete the study, and therefore, no additional funds are requested.

Little River County study.—The Congress appropriated $150,000 in fiscal year 1992 and $237,000 and $400,000 in fiscal year 1992 to conduct in Little River County a feasibility study. The feasibility study is to explore the modification of existing levees and the construction of new levees to avoid a possible repeat of the devastating flood in May of 1990. Total funding of $640,000 is needed to conduct the feasibility study in Little River County and sufficient funds are on hand, but for the study to take place there must be a cost sharing agreement with a sponsor that will pay one-half of the costs.

Red River Waterway, Mississippi River to Shreveport, LA.—It is a pleasure for the Red River Commission of Arkansas to join with the State of Louisiana to seek funding for the completion of construction of Locks and Dams No. 4 and No. 5. We are well aware of the economic impact that will occur when the navigable channel reaches the port of Shreveport, Louisiana. We, therefore, urge your approval of $135,000,000 for FY 1994 for this project.

Red River basin chloride control project.—The Red River is severely contaminated by natural brines emanating from fifteen natural sources. We urge your support of the continuation of the construction of the low flow dams and pump stations and brine detention reservoirs at the remaining six locations by the appropriation of $14,000,000 for FY 1994.

VALLEY PARK, MO, FLOOD CONTROL PROJECT

STATEMENT OF HON. JOHN C. DANFORTH, U.S. SENATOR FROM MISSOURI

Senator JOHNSTON. Thank you very much. I notice the presence in the back of the room of Senator Danforth of Missouri.

Senator Danforth, if you will come forward, we would like to hear from you at this time. We are delighted to have you here. I know you want to introduce some people from Missouri. We will hear from them later. We would like to hear from you now.

Senator DANFORTH. Mr. Chairman, thank you very much. I appreciate your taking me out of order. I had hoped that all these people who were leaving the room were here for the Valley Park flood control project, but that is not quite right.

There is a good group here from Valley Park once again. I think that there is something like a half a dozen people, including the mayor. I understand that they will be testifying later. I am simply here to introduce them to you, and to underscore the importance of this project.

This is something that funds have been appropriated for in the past, the land, the acquisition of right-of-ways now underway. The immediate need grows out of a major flood in 1982, in which the city of Valley Park, MO, was under about 6 to 10 feet of water. It was really a very, very destructive and heartrending flood.

Since that time the people of Valley Park have been absolutely mobilized in their support. It is impossible for me to be anywhere close to Valley Park without having the people of Valley Park put together a meeting to press on the urgency of this particular flood control project.

It really has been heartening to see the good will and the spirit of the people of this community, and their willingness to provide their cost share, which they have done, and the tremendous mobilization of the community for this.

It is clearly needed, Mr. Chairman. The 1982 flood was just a first-rate disaster for a community that has been there for some period of time. So I strongly recommend this appropriation, and I urge it on the committee.

Senator JOHNSTON. Well, thank you very much, Senator Danforth. The fact that you would come here and testify on behalf of that project brings it specially to our attention, and will up its consideration in priority in a tough budget year.

But we hear you, particularly about the danger to life and property which this project represents. We appreciate your coming here to give it very preferred attention.

Senator DANFORTH. Thank you, Mr. Chairman. I appreciate it.

PREPARED STATEMENT FOR THE RECORD

Senator JOHNSTON. Senator Cochran has asked that the statement of Peyton Self representing the Delta Council be made part of the hearing record.

So, without objection, that will be included at this point.

[The statement follows:]

STATEMENT OF PEYTON SELF, MARKS, MS

Mr. Chairman and members of the committee, my name is Peyton Self, and I am a farmer and businessman from Marks, Mississippi, located approximately 75 miles south of Memphis, Tennessee, in the northern part of the Mississippi Delta. I appear before you today, on behalf of Delta Council, an organization representing Northwest Mississippi which has provided testimony before this committee for almost the past half century. I have with me today, the President of Delta Council, Mr. T.S. Shuler, from Greenville, Mississippi. I ask that my written testimony be provided for the record so that I might abbreviate my remarks in the interest of the committee's time.

The Yazoo Basin, which encompasses the largest watershed area in the Lower Mississippi River Valley, has registered vast improvements in flood protection and drainage in previous years as a direct result of the continued commitment this subcommittee has made. In those areas of our region where these projects are completed, rural and urban citizens alike have enjoyed a higher standard of living due to the improved flood protection and elimination of flood damages that have cause tremedous economic loses to our region in the past. We are pleased to report to the committee that the actual completion of these flood control projects is now in sight and through the diligence and long-term commitment of members of this subcommittee, we are now assured of these projects being completed within the next 10 years.

In recent years, we have seen emergency flood fights in our region that were successful in protecting entire communities such as my hometown of Marks, Mississippi. These emergency flood fights serve as a constant reminder of the urgency of completion of these flood control measures. Through the energy of local people working jointly through our Levee Boards and the Corps of Engineers, we have been successful in accelerating the projected plans for completion of the Yazoo Basin projects and with your help, we will meet these objectives within the next decade.

Delta Council and the elected state and local leaders throughout the entire Yazoo basin area would like to praise the work of this subcommittee and specifically request that you continue to provide funding at the level submitted by the Vicksburg District for the Upper Steel Bayou Project, the Upper Yazoo Project, the Backwater Project, and all other affiliated maintenance projects that are fundamental to the economic outlook of our entire region.

Thank you for allowing me to appear before you today.

ENERGY AND WATER RESOURCES

Corps of Engineers	Fiscal year—	
	1993	1994
Demonstration erosion control	$23,000,000	$20,000,000
Abiaca	2,383,000	
Upper Yazoo project	6,800,000	5,647,000
Upper Steele Bayou	5,750,000	9,899,000
Tallahatchie River maintenance	3,384,000	902,900
Yalobusha River maintenance	2,500,000	3,558,000
Big Sunflower-Bogue	3,515,000	1,500,000
Yazoo backwater pumps	175,000	2,000,000

LOWER MISSISSIPPI RIVER NAVIGATION IMPROVEMENTS

STATEMENT OF GEORGE DUFFY, CHAIRMAN, GOVERNOR OF LOUISIANA MARITIME TASK FORCE

Senator JOHNSTON. Next we will hear from the Port of New Orleans, with George Duffy, who is chairman of the Governor's Maritime Task Force.

Welcome, George. Please proceed.

Mr. DUFFY. Thank you, Mr. Chairman. My name again is George Duffy. I am chairman of the Louisiana Governor's Task Force on Maritime Industry. I will be submitting the testimony on behalf of the Port of New Orleans and of the Louisiana maritime community.

We have already submitted our written testimony, so in the interest of time I would like to just review the charts we have submitted and call on our other witnesses.

Senator JOHNSTON. Without objection.

[The statement follows:]

STATEMENT OF J. RON BRINSON, PRESIDENT AND CHIEF EXECUTIVE OFFICER, PORT OF NEW ORLEANS

SUMMARY

Summary of testimony of the Board of Commissioners of the Port of New Orleans by J. Ron Brinson, President and Chief Executive Officer, before the Senate Appropriations Subcommittee on Energy and Water Development on March 29, 1993 in reference to the following projects:

Mississippi River ship channel, gulf to Baton Rouge, LA (construction general).—We recommend funding to full capability of the Corps for fiscal year 1994 for continuing first phase deepening mitigation features and second phase deepening from Mile 181 to Mile 232. 2.

Mississippi River, Baton Rouge to the gulf, maintenance dredging.—We urge that Congress appropriate the Corps' full capability under O&M General in fiscal year 1994 for this work. The additional funding will permit the accomplishment of critical dike work and bank nourishment.

Mississippi River-gulf outlet (MR–GO), LA, maintenance dredging.—We recommend Congress appropriate the full Corps capability for fiscal year 1994 for this project. This will permit critical jetty repairs and required annual maintenance dredging.

Mississippi River-gulf outlet, Louisiana, new ship lock.—We recommend the Corps' full capability in fiscal year 1994 construction funds proposed for the IH-NC New Ship Lock which are essential to the completion of local reevaluation studies and continuation of general design studies.

Mississippi River outlets at Venice, LA.—We recommend approval of the Corps' full capability for fiscal year 1994 for continued maintenance of these critical east-west navigation channels (Baptiste Collette and Grand and Tiger Pass).

Intracoastal Waterway locks, Louisiana and MR–GO bank erosion.—We urge approval of GI funds in the amount of the Corps' full capability for fiscal year 1994 to address the need for and timing of replacements of locks on the GIWW west of the Mississippi River. We also urge approval of budgeted GI funds for an MR–GO bank erosion/riprap study.

Red River Waterway, Mississippi River to Shreveport, LA.—It is essential that completion of work already underway (Locks and Dams 4 & 5) on this project—ultimately to result in stimulating economic growth along the Red River Basin and increase cargo movements through the Port of New Orleans be funded. We strongly recommend appropriation of $135,000,000 for fiscal year 1994 to provide for substantial completion of this vital project.

STATEMENT

Mr. Chairman, I am J. Ron Brinson, President and Chief Executive Officer, Port of New Orleans. I am here to testify on behalf of the Board of Commissioners of the Port of New Orleans—a unit of local government of Louisiana—and on behalf of neighboring Gulf States, the Mid-America States and the Nation as a whole.

The Mississippi River from the Gulf of Mexico to Mile 181 AHP is a 45-foot deep channel. The District Engineer of the U.S. Army Corps of Engineers, New Orleans District recently released the preliminary Corps' cargo tonnage figures for consolidated ports of South Louisiana for 1991. These ports are those that makeup the deepwater ports on the lower Mississippi River from Baton Rouge to the Gulf of Mexico. A grand total of 368.4 million tons of foreign and domestic waterborne commerce moved on this 232 miles of the Mississippi River in 1991. The deepening of the Mississippi River several years ago certainly was a factor in the deepwater ports on the lower Mississippi River improving their tonnage statistics. Thanks to Congress and the efforts of the New Orleans District, we feel that we now are in a more competitive position with the import/export bulk ports of the world. That position of strength in trade is essential to our nation's very well-being when one considers that foreign trade has been, and continues to this day, a sustaining force behind our country's growth. Ninety-one percent of our foreign merchandise trade by volume—and two-thirds of it by value—moves in ships. With 20.8 percent of the nation's foreign waterborne commerce passing through the ports of Louisiana, the State of Louisiana has had a profound influence on employment, plant construction and access to worldwide markets.

We believe our Louisiana ports have a distinct advantage in access to foreign markets at competitive transportation costs. In order to handle the waterborne commerce, hundreds of barge lines serve our nation's inland waterways. In the lower Mississippi River region, over 100,000 barges pass through the Port of New Orleans annually, handling the waterborne commerce of the area. To carry the cargo between New Orleans and its trading partners throughout the world—serving, for example, more than 150 countries—approximately 2,461 vessels, operated by more than 100 steamship lines, call at the port in a year's time. These trading partners and percentages of trade are Europe (31.5 percent), Latin America (28 percent), Asia (29.6 percent) and Africa (9.6 percent).

It is undeniable that the New Orleans area plays a vital role in the international commerce of this nation. In 1991, the lower Mississippi River (Baton Rouge to the Gulf of Mexico) handled 155.1 million tons of foreign waterborne commerce. Worth $27.2 billion, this cargo represented nearly 17 percent of the nation's international waterborne trade. Bulk cargo accounted for 94 percent of this volume, primarily the result of tremendous grain and animal feed exports and petroleum imports. More specifically, over 68.7 million tons of grain coming from 17 states and representing 60.1 percent of all U.S. grain exports entered the world market via the ten grain elevators and midstream transfer capabilities on the lower Mississippi River. This same port complex received 39.2 million short tons of petroleum and petroleum products in 1991, approximately 10 percent of the U.S. waterborne imports of petroleum products.

Also in 1991, public and private facilities under the jurisdiction of the Board of Commissioners of the Port of New Orleans handled 47.5 million tons of foreign cargo worth $11.3 billion (included in lower Mississippi River statistics). Of this amount, general cargo tonnage totalled 7.0 million tons (major commodities: iron and steel products, rice, paper products, coffee and crude rubber). Although the volume of bulk cargo statistically dwarfs the amount of general cargo handled, the significance of the port in the movement of general cargo should not be overlooked. The Port of New Orleans consistently ranks in the top seven general cargo ports in the country. Furthermore, per ton, general cargo is very valuable to the community as it produces a greater local economic benefit than does bulk cargo.

While the port's foreign market is worldwide, its domestic market is primarily mid-America, the heartland of the United States. This heartland region currently produces 60 percent of the nation's agricultural products, 1/2 of all of its manufactured goods, and 90 percent of the country's machinery and transportation equipment. Waterborne commerce from this region is projected to reach 800 million tons by the year 2000.

Essential to our national economy is the continued growth and development of the lower Mississippi River regional complex. Most major trading nations of the world have deep draft ports and are in the process of developing more. With the passage of the Water Resources Development Act of 1986, United States ports are on the way to becoming more competitive in the world marketplace.

By the end of December 1988, the Corps had completed the initial construction dredging of the 45-foot channel from the Gulf of Mexico to Mile 181 AHP, thereby capturing the majority of estimated benefits attributed to the deeper channel. In fact, nine of the ten active grain elevators and four floating grain elevators that serve the vast mid-American, agricultural hinterland are reasonably assured of a minimum safe channel depth of 45-feet. Remaining yet for total first phase completion of the project are the project mitigation features for which we urge that the Corps be funded to its full capability in the fiscal year 1994 Construction, General, Appropriation funds. This is the fiscal year 1994 portion of approximately $15 million in payments to the State of Louisiana to construct a pipeline and pumping stations for delivering potable fresh water to communities affected by saltwater intrusion. If the State of Louisiana signs the agreement later in 1993 as expected, this will relieve the Corps from the responsibility for barging fresh water to the parish every year. The Corps is continuing work on the design memorandum for phase two dredging of the river to 45 feet from Mile 181 to Mile 232. The design memorandum is under review and once it is complete and the LCA is executed, construction can go forward. It is recommended that the Corps' full capability funding be provided to allow this most important project to go forward on a timely basis.

In 1991, the Port of Baton Rouge handled 87.6 million tons to retain its position as the fifth largest port in the nation. Both New Orleans and Baton Rouge port complexes are entirely dependent upon timely and adequate dredging of the Southwest Pass to provide access to the Gulf. Judging from past experiences with spring thaws bringing higher river stages and higher rates of siltation, we urge Congress to appropriate the Corps' full capability under O&M General for maintenance of the 45-foot project channel which provides deep draft access to the deep draft ports on the lower Mississippi River from Baton Rouge to the Gulf. This funding includes monies for both dredging and repairs to jetties, foreshore dikes, and channel training pile dikes, marsh creation and bank nourishment.

We are equally concerned with maintaining adequate depths and channel widths in the Mississippi River-Gulf Outlet Channel. The MR–GO handles cargo volumes equivalent to all the general cargo moved via the Port of Mobile; moves as much general cargo as all other East Gulf Ports combined, excluding Mobile; is responsible for 87 percent of all container cargo in the State of Louisiana; and generates an annual economic impact of well over a billion dollars. We recommend the appropriation of the full Corps capability for fiscal year 1994 for this project. This will permit critical jetty repairs and annual maintenance dredging. This project also provides deep draft access to the Port of New Orleans. Incidentally, in 1991 the 640 vessels calling on the MR–GO Tidewater facilities accounted for 37.6 percent of the general cargo tonnage handled over public facilities at the Port of New Orleans.

We recommend the Corps' full capability in fiscal year 1994 construction funds proposed for the IH-NC New Ship Lock which are essential to the completion of local reevaluation studies and continuation of general design studies.

The operation and maintenance features of the Mississippi River Outlets at Venice, Louisiana are fundamental in providing safe and essential offshore support access to energy-related industries. In addition to routine traffic, Baptiste Collette Bayou is occasionally used by shallow draft vessels as an alternate route between the MR–GO and the Mississippi River. We strongly recommend approval for the Corps' full capability for the continued maintenance of these critical east-west navigation channels, Baptiste Collette and Grand and Tiger Pass.

We urge approval of GI funds in the amount of the Corps' full capability for fiscal year 1994 to address the need for and timing of replacements of locks on the GIWW west of the Mississippi River. We ado urge approval of budgeted GI funds for an MR–GO bank erosion/riprap study.

In closing, I would like to speak to one more project that deserves our attention; that is, the Red River Waterway, Mississippi River to Shreveport, Louisiana Project, providing for 236 miles of navigation improvements, 225 miles of channel stabilization works, and various recreational facilities. It is essential that completion of work already underway (Locks and Dams 4 & 5) on this project—ultimately to result in stimulating economic growth along the Red River Basin and increase cargo movements through the deepwater ports on the lower Mississippi River be funded. We strongly recommend appropriation of $135,000,000 for fiscal year 1994 to provide for substantial completion of this vital project.

Mr. Chairman, this concludes my statement and I thank you.

STATISTICAL DATA—LOWER MISSISSIPPI RIVER

Length: 2,350 miles from its starting point at Lake Itasca, Minnesota or 3,750 miles from the head waters of the Missouri River at Red Rock, Montana.

The Mississippi (including tributaries) is ranked as the third longest river in the world after the Nile which is 4,180 miles and the Amazon which is 3,912 miles long.

Watershed area: 1,244,000 square miles. The river drains 31 contiguous states in the United States and 2 provinces of Canada. This takes in 41 percent of the continuous land area of the United States.

Average daily flow: 460,000 cubic feet per second. This flow is equivalent to 297,000 million gallons per day.

Average velocity: 3.1 miles per hour.

Sediment load: This load is equivalent to 138 million cubic yards per year. This yardage would fill the Louisiana Superdome in New Orleans 30 times or would cover a land area of 32 square miles to a height of 105 feet.

PORT OF NEW ORLEANS

In 1718, the explorer Bienville founded the City of New Orleans near the mouth of the Mississippi River—14,500 miles of navigable waterways which link more than twenty states to the markets of the world. Today, 275 years later, the U. S. Army Corps of Engineers reports that the Port of New Orleans handled 60.3-million tons of waterborne commerce (preliminary 1991 foreign and domestic data).

It is undeniable that the New Orleans' area plays a vital role in the international commerce of this nation. In 1991, the lower Mississippi River (Baton Rouge to the Gulf of Mexico) handled 155.1 million tons of foreign waterborne commerce. Worth $27.2 billion, this cargo represented 17 percent of the nation's international waterborne trade. Bulk cargo accounted for 94 percent of this volume, primarily the result of tremendous grain and animal feed exports and petroleum imports. More specifically, over 2.45 billion bushels of grain or 60.1 percent of all U.S. grain exports entered the world market via the ten grain elevators and midstream transfer facilities on the lower Mississippi River. This same geographical area received 39.2 million tons of petroleum products in 1991, 10 percent of the U.S. waterborne imports of this commodity.

In addition to being vital to the international commerce of the nation, foreign trade through the Port of New Orleans has a direct impact on the local economy. A published study reports the (1) more than 50 percent of the $10 billion worth of goods and services produced annually in the area are in some way dependent on oceangoing commerce; (2) over 67,000 jobs or one-fifth of the jobs in the area can be traced to port activity; and (3) one-fourth of the wages paid in the area can be linked to port activity.

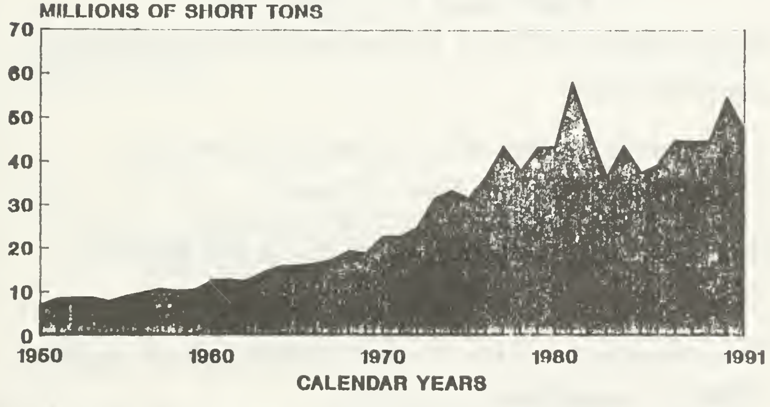
In 1991, the Port of New Orleans handled approximately 47.5 million tons of foreign cargo worth $11.3 billion (included in the lower Mississippi River statistics). Of this amount, general cargo tonnage total led 7.0 million tons (major commodities included: iron and steel products, paper and paper products, refined sugar, pulp and waste paper, coffee, machinery and transportation equipment, and aluminum and aluminum alloys). Although the volume of bulk cargo statistically dwarfs the amount of general cargo handled, the significance of the port in the movement of general cargo should not be overlooked. The Port of New Orleans is one of the top ten general cargo ports in the nation. Furthermore, per ton, general cargo is very valuable to the community as it produces a greater economic benefit than does bulk cargo.

In order to handle the waterborne commerce of this area, more than 800 barge lines serve the inland waterways and 100,000 barges pass through the port annually (an estimated 50 percent of all general cargo is moved to and from the port by barge, 30 percent by rail and 20 percent by truck). To carry the cargo between New Orleans and its trading partners throughout the world (150 countries), approximately 2,400 vessels operated by more than 100 steamship lines call at the port in a year's time (major world areas: Asia 29.6%, Europe 31.5%, Latin America 28.0%, and Africa 9.6%).

While the Port's foreign market is worldwide, its domestic market is primarily Mid-America, the heartland of the United States. This region currently produces 60 percent of the nation's agricultural products, 50 percent of all its manufactured goods, and 90 percent of the country's machinery and transportation equipment. By the year 2000, waterborne commerce from this region is expected to double. To accommodate this and other areas of growth, the Port of New Orleans launched a $400 million, 30-year capital improvement program in 1970 (valued in 1970 dollars). Thus far, the Port has spent $150-million and has begun working on a $200 million facility improvement program to be accomplished over the next two years. These funds will be expended in the two major areas of the Port—(1) the Mississippi River, which has 12 miles of wharves stretching along the waterfront, and (2) the Tidewater area which is served by the Mississippi River-Gulf Outlet (MRGO). (Almost 38 percent of the Port's tonnage over public general cargo wharves is handled by the facilities on the MRGO.)

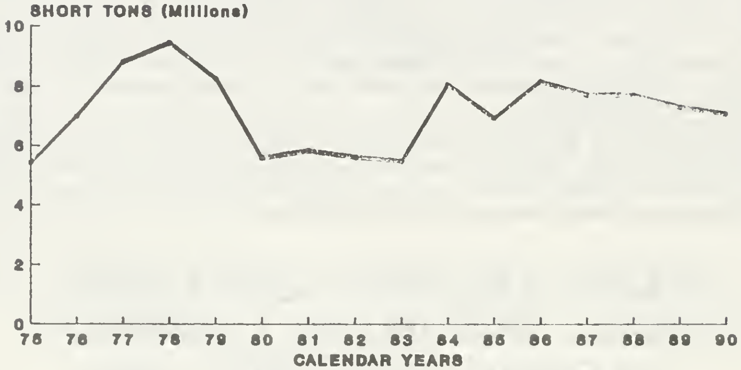
In summary, the Port of New Orleans is a dynamic, growing port. In the 275 years since Bienville founded the City of New Orleans, the Port has experienced dramatic changes. One thing, however, has remained constant. The Port of New Orleans has always played and will continue to play a vital role in the local economy and in the international commerce of the United States.

PORT OF NEW ORLEANS
FOREIGN WATERBORNE COMMERCE*
CALENDAR YEARS 1950 - 1991



* GENERAL AND BULK CARGO

Source: U.S. Dept. of Commerce

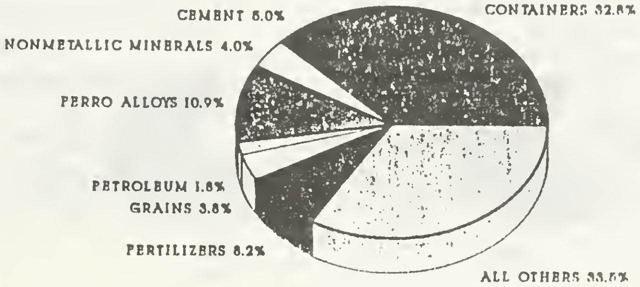


MISSISSIPPI RIVER GULF OUTLET
CALENDAR YEARS 1975 - 1990
BULK AND GENERAL CARGO TONNAGE

Mississippi River Gulf Outlet
Facts and Comparisons

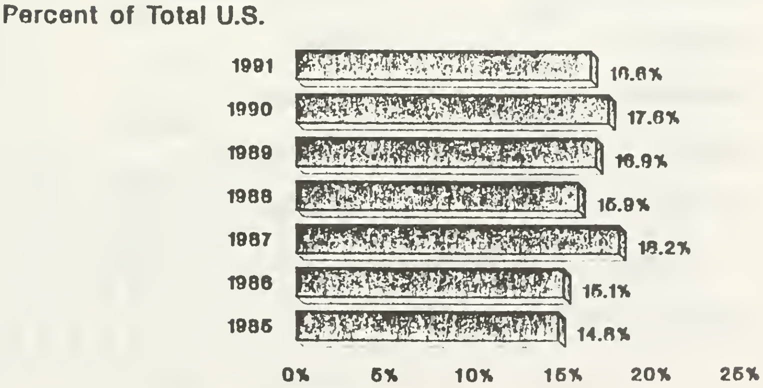
- Responsible for three million tons of international general cargo.
- Represents almost 40% of the total general cargo of the Port of New Orleans.
- Handles cargo volumes equal to all the general cargo moved via the Port of Mobile.
- Responsible for 87% of all container cargo in the State of Louisiana.
- Moves as much general cargo as all other East Gulf ports combined, excluding Mobile.

MISSISSIPPI RIVER GULF OUTLET
1990 TOTAL WATERBORNE COMMERCE
COMMODITY PROFILE



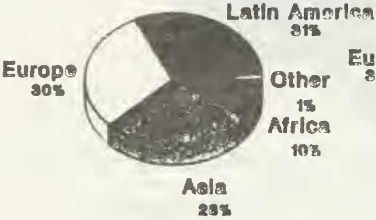
Sources: U.S. Army Corps of Engineers,
Port of New Orleans

LOWER MISSISSIPPI RIVER
FOREIGN WATERBORNE COMMERCE
CALENDAR YEARS 1985 - 1991

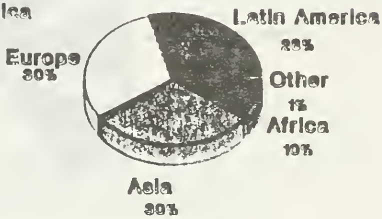


SOURCE: U.S. Dept. of Commerce

LOWER MISSISSIPPI RIVER
FOREIGN WATERBORNE COMMERCE
CALENDAR YEAR 1991



Dollar Value
By World Area



Tonnage
By World Area

Dollar Value (millions)

Principal Countries:	
Japan	$ 2,989
Soviet Republics	1,941
Venezuela	1,578
Netherlands	1,537
Mexico	1,460
All Others	17,631
Total	$ 27,136

Tonnage (000's of short tons)

Principal Countries:	
Japan	18,800
Soviet Republics	14,756
Mexico	11,881
Venezuela	10,999
Netherlands	7,652
All Others	91,023
Total	155,111

SOURCE: U.S. Dept. of Commerce

LOWER MISSISSIPPI RIVER *
PRINCIPAL COMMODITIES 1991

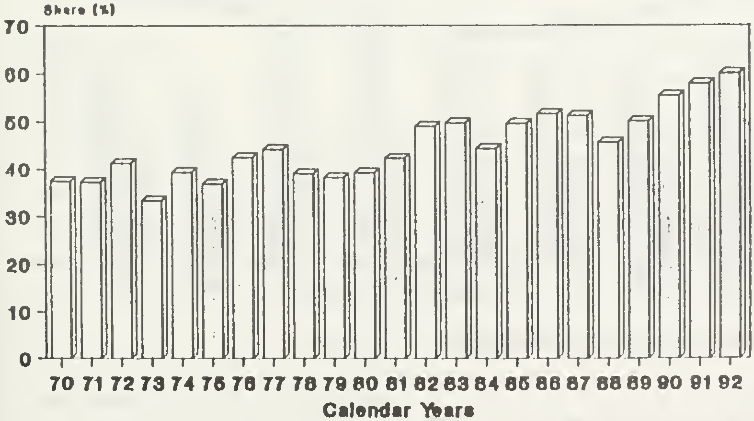
Imports	56,081,734 Short Tons
Petroleum & Petroleum Products	39,214,730
Metalliferous Ores	6,403,157
Fertilizers	3,293,654
Iron and Steel	3,000,105
Gas, nat'l & manufac.	794,355
All Others	3,375,733

Exports	99,028,679 Short Tons
Cereal & Cereal Prods.	44,672,974
Coal, Coke & Briquettes	14,275,753
Oilseeds & Oleaginous Fruit	13,916,263
Animal Feeds	11,719,809
Petroleum & Petroleum Products	7,204,061
All Others	7,239,819

• FOREIGN WATERBORNE COMMERCE

SOURCE: U.S. Dept. of Commerce

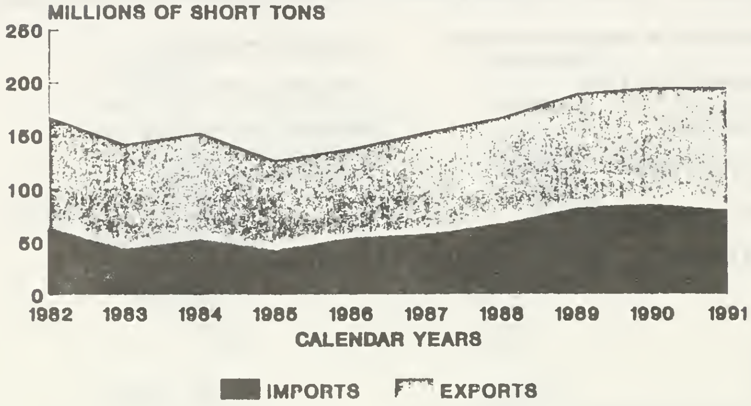
Lower Mississippi River Grain Exports
As a Percentage of the United States•
Calendar Years 1970 - 1992



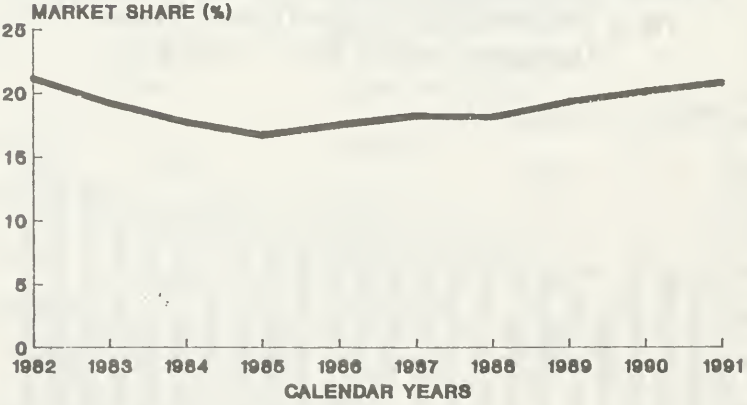
• Market Share Based on Bushels

SOURCE: U.S. Department of Agriculture

LOUISIANA PORTS
FOREIGN WATERBORNE COMMERCE
CALENDAR YEARS 1982 - 1991

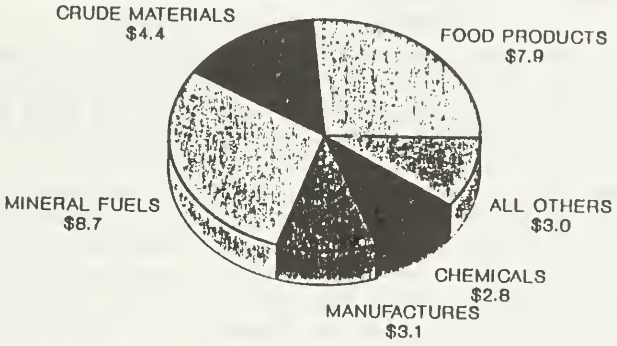


LOUISIANA PORTS
MARKET SHARE OF UNITED STATES
CALENDAR YEARS 1982 - 1991



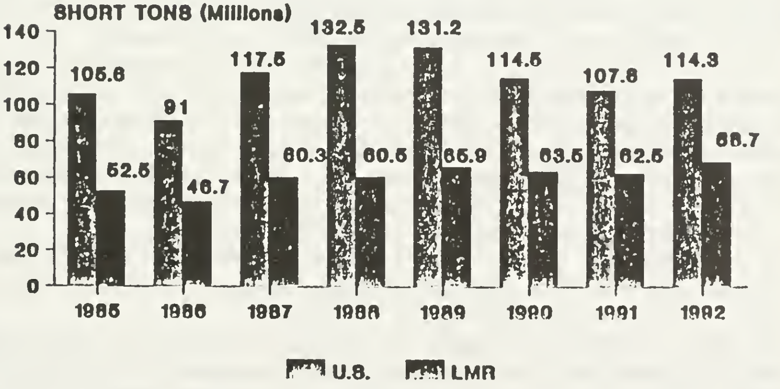
SOURCE: U.S. DEPT. OF COMMERCE

LOUISIANA PORTS
FOREIGN WATERBORNE COMMERCE 1991*
COMMODITY PROFILE



*BILLIONS OF U.S. DOLLARS
SOURCE: U.S. DEPT. OF COMMERCE

United States & Lower Mississippi River
Grain Exports
Calendar Years 1985 - 1992



SOURCE: USDA (con. from bushels to tons)

NOTE: The LMR is the major geographical area for U.S. grain exports.

INTRODUCTION OF SUPPORTING WITNESSES

Mr. DUFFY. I am accompanied today by Mr. Channing Hayden, vice president of the New Orleans Steamship Association, and Capt. Jack Levine, president of the Associated Branch Pilots, who will also have brief supporting testimony.

I am also accompanied by 13 other members of the Louisiana maritime trade and waterway leaders that I would like to ask to be introduced into the record.

They are: Mr. J. Edward Barr, executive director of New Orleans Board of Trade; Capt. Russell Belsam, president of the Association of Federal Post Pilots; Mr. H.R. Ben Vadnudy, port manager of Plackman Ports, LA; Mr. Louis Portia, from the Port Plackman Parish Port; Mr. David Burns, president of the New Orleans Steamship Association; Capt. Jill Clayton, president of the New Orleans Baton Rouge Pilots Association; Capt. Douglas Grubbs, substituting for the president of the Crescent River Pilots, Capt. Mark Tulasnay, who could not be here today; Mr. Joseph W. Harper, vice president of ITO Corp.; Mr. Gary Pruett, executive director of the Greater Port of Baton Rouge; Mr. Louis A. Ruez, executive director of St. Bernard Port and Harbor Terminal Districts; Mr. Ronnie Barringer, senior vice president, Gulf and Eastern; Mr. Dan Campbell from Turner Marine, and Ms. Susan Wingfield, president of the Energy Environmental Service.

Senator JOHNSTON. I would like to welcome all of you distinguished people who have come up here for this hearing. Some of you, I think it is your first time, and we would like to welcome you back for a repeat performances.

We know the importance of what you do and we try to give you good service. We will listen very carefully to your testimony.

Mr. DUFFY. Thank you, Mr. Chairman. At this time, I would like to just summarize the testimony that was submitted by the Port of New Orleans on the major projects that we are seeking the Senate Appropriations Committee sponsorship and passage.

One is the Mississippi Ship Channel, from the gulf to Baton Rouge; the Mississippi River, Baton Rouge to the gulf, maintenance dredging on that project; the Mississippi River-gulf outlet, maintenance dredging; the Mississippi River-gulf outlet, the new ship lock; Mississippi River-gulf outlet at Venice, LA; the Intracoastal Waterway locks, and MR–GO bank erosion project; and the Red River Waterway, Mississippi River to Shreveport, LA.

Mr. Chairman, at this time I would like to have Mr. Channing Hayden, the vice president of the New Orleans Steamship Association give his brief supporting our testimony.

Senator JOHNSTON. I hope one of the witnesses—I am looking through your charts here, and seeing what appears to be a pretty good trend, certainly, in grain exports as a percentage of U.S total.

It looks like a very solid upward trend. I would like somebody to just speak about the port and its role in world commerce, and which direction we are headed in, and what the challenge is.

Mr. DUFFY. I think Mr. Hayden will cover part of that in his presentation, Mr. Chairman.

STATEMENT OF CHANNING HAYDEN, VICE PRESIDENT, NEW ORLEANS STEAMSHIP ASSOCIATION

Mr. HAYDEN. Good morning, Mr. Chairman. My name is Channing Hayden. As Mr. Duffy said, I am vice president of the New Orleans Steamship Association.

We support the statements made by the dock board and the branch pilots and we request our written statement be made part of the record.

NATIONAL ECONOMIC BENEFITS

In the interests of time, I would like to focus on a few points of my written statement. I have been privileged to appear before this committee since 1980, stressing that your unwavering commitment to the Mississippi River is actually an investment in the American economy.

A recent Marad analysis of the U.S. port industry proves that point. Over 13 percent of America's 1991 waterborne commerce was handled by the ports from Baton Rouge to the gulf.

Based on Marad data, we estimate that Louisiana's deep-water port industry generated the following impact on the U.S. economy: About 200,000 jobs, about $6.8 billion in personal income, about $2.9 billion in business income, and $17.1 billion in business sales revenues. These are the issues that you wanted addressed, in terms of the importance of our State's ports to the national economy.

Senator JOHNSTON. What I am talking about is the trend on how we are doing year to year.

Mr. HAYDEN. I think we are doing well, Mr. Chairman. We have no earlier economic model to compare with. Marad has done some recent adjustments in their model. And this is what we have extracted, as far as Louisiana is concerned.

Naturally, we are handling about 60 percent of the U.S. grain exports and we now have a significant amount of coal coming down the river, which was not there 10 years ago. I think that has helped our balance of payments, also.

The figures that I just gave you exclude the economic impact of the products exported. For example, it does not count the grain, the coal, and all the other U.S. merchandise that reach world markets cheaply and efficiently via Louisiana's ports. Your astute investments in Louisiana are truly investments in America.

MISSISSIPPI RIVER SHIP CHANNEL, BATON ROUGE TO GULF

MAINTENANCE DREDGING

The Southwest Pass's problem is basically under control. We must concentrate on maintaining increased and increasing channel dimensions above mile 181 to provide a reliable 45-foot channel from the gulf to Baton Rouge.

Only two dustpan dredges exist in the whole world capable of dredging the 11 crossings above New Orleans and deep-draft channels like ours. The Corps warns us that these two dredges are not enough.

Another long-ladder dustpan dredge is needed to reliably maintain the present channel and a second will be needed to maintain the 45-foot channel when it is extended to Baton Rouge.

Congress has provided initial funding to extend the 45-foot channel to Baton Rouge. We ask you to continue the channel-deepening funds and to provide the specialized equipment needed to maintain the deeper channel.

MINIMUM DREDGE FLEET STUDY

The Corps' minimum dredge fleet study is still a topic of considerable debate. Tomorrow, maritime interests from around the country meet with the National Dredging Contractors Association to continue our discussions on how to best address the twofold problems facing us; that is, maintaining a viable hopper dredge industry, while ensuring enough hopper dredge capacity, either in the private fleet or in the combined private Corps' fleet, to meet the Nation's hopper dredging needs.

Until a workable solution is devised, we ask Congress to hold in abeyance any further restrictions on the Corps' hopper dredge fleet.

Without a fully discussed, well thought-out plan, adjustments to the Corps' dredge fleet utilization may well jeopardize economic benefits cited above. Please give this matter the same perceptive consideration you have given to all the dredging issues that affect the Nation's ports.

Finally, we thank you for your help with erosion problems along the MR–GO. About 3 miles of rock protection on the north bank is almost complete. Please continue addressing this problem in the 1994 budget by approving funds for a long-range erosion riprap study.

In closing, a word of apology. Usually, we appear before you after the Corps of Engineers, when budget and capability information is available. Lacking that data this year has caused our testimony to be less specific than otherwise. Hopefully, in future years our testimony can again be scheduled when budget information is available.

Thank you for allowing me to appear today.

Senator JOHNSTON. Thank you, Channing.

[The statement follows:]

STATEMENT OF CHANNING HAYDEN

SUMMARY

Summary of testimony of Channing Hayden, Vice President of the New Orleans Steamship Association, before the Senate Energy and Water Development Subcommittee on Appropriations; at 10:00 am., Monday, March 29, 1993, in reference to the projects of public interest on the Lower Mississippi River from its mouth to Baton Rouge.

Forty-five-foot channel for lower Mississippi River.—We recommend that the Corps be funded at its full capability of construction funds for fiscal year 1994 to continue the saltwater intrusion mitigation features of the first phase of the deepening project and initiate the second phase of this project, deepening the channel to 45 feet from Mile 181 to Baton Rouge.

Channel stabilization and maintenance dredging of Southwest Pass and maintenance dredging of the Mississippi River from Baton Rouge to the gulf.—The Lower Mississippi River, from the Gulf to Baton Rouge, ranks as a leading World Port area. We urge the approval of the Corps' full O&M General capability in fiscal year 1994 to permit critical dike work below New Orleans, bank nourishment, marsh creation and channel maintenance.

Mississippi River-gulf outlet maintenance dredging and bank erosion.—Located on this waterway are the Port of New Orleans' Bulk Handling Plant, most of the Port's container facilities and the ro-ro terminal. We urge the appropriation of the Corps' full capability for this project for critical jetty repair and a bank erosion/riprap study.

Mississippi River-gulf outlet, new ship lock.—This Lock, once in operation, will relieve existing hazardous congestion and costly delays to foreign commerce. It will promote the economic growth and development of water-oriented industries along the Mississippi River and the Mississippi River-Gulf Outlet, thus promoting the future growth of the Port area of New Orleans. We urge that Congress provide the Corps' full construction capability in fiscal year 1994 for this project.

Red River Waterway, Mississippi River to Shreveport, LA.—We urge funding the Corps to its full capability for continuing this project. The project will provide a direct water link between Shreveport, a major distribution center serving Louisiana, Texas, Oklahoma and Arkansas, and the ports of Plaquemines, St. Bernard, New Orleans, South Louisiana and Baton Rouge.

Intracoastal Waterway locks, Louisiana.—We urge approval of GI funds in the amount of the Corps' full capability for fiscal year 1994 to address the need for and timing of replacements of locks on the GIWW west of the Mississippi River.

STATEMENT

Mr. Chairman, my name is Channing Hayden. I am Vice President of the New Orleans Steamship Association. Our membership of some 60 steamship owners, operators, agents and stevedores operating on the Lower Mississippi River from the Gulf to Baton Rouge represent hundreds of shipowners and thousands of ships in international commerce. We endorse the statements made today by the Board of Commissioners of the Port of New Orleans and the Associated Branch Pilots. The projects we support impact the nation in jobs and the country's ability to compete in world markets. They should be funded as noted in our summary.

Channel stabilization and maintenance dredging in Southwest Pass are critical to keep project draft. Project draft ensures the Mississippi River's deep water ports will handle the country's foreign waterborne commerce in the most cost effective way possible.

For years we have urged this Committee to provide funds to maintain project draft at Southwest Pass. You have responded, and your wisdom has benefitted the entire hinterland served by the Mississippi River System. Southwest Pass was greatly restricted throughout the 1970's. From 1970 to 1975 the channel was at less than project draft 46 percent of the time. In 1973 and 1974 the channel was below the 40-foot project draft 70 percent of the time. During some periods, drafts were limited to 31 feet. Fortunately, those conditions have not recurred because of a combination of factors: your help and the constant vigilance of the Pilots, the Corps, and the maritime community. During the 1980s we operated at or above project draft more often than not. The funding you provided was money well spent on an improved channel. The repairs to the jetties and dikes and the Corps' ability to rapidly respond to shoaling have been instrumental in maintaining project. Three years ago, we reported to you serious shoaling and groundings, lasting from February to May and costing our industry some $28 million—plus an immeasurable loss of confidence in draft stability. Since that time, May of 1990, we have been continuously at or above project draft.

Stable draft is critically important, particularly in the bulk trade. Much of Louisiana's bulk trade is export agricultural products and coal. These export commodities are neither captive to Louisiana nor the United States if they can be shipped from competing countries at consistent and lower costs.

The Pilots have taken advantage of tidal flows and other factors to recommend the maximum draft possible consistent with navigational safety. Two years ago we set a new record with draft recommendations of 49 feet for vessels under 100,000 deadweight tons and 48 feet for those over 100,000 deadweight tons, an eight to nine foot improvement over the old 40-foot project draft and four to five feet over the authorized project. Twelve inches to a large vessel with a loading capacity of 250 tons per inch is an additional 3,000 tons of cargo. At a freight rate of $15 per ton, this is $45,000 for each foot, or a $360,000 increase in revenue for eight feet of added draft. Industry's partnership with you has kept Mississippi River ports competitive. The current draft at Southwest Pass is 47 or 48 feet, depending on the size of the ship.

The funds we are requesting for maintenance dredging and other works are essential for the Corps of Engineers to maintain a reliable channel and allow them to speedily respond to potential problems. This builds the confidence of the bulk trade in a reliable draft on the Mississippi River. But the deeper the channel, the more important channel stabilization is. By ensuring adequate channel stabilization work, the maintenance cost of the deeper channel is minimized. If recurring maintenance dredging can be minimized by investing in stabilization, then the investment is cost effective. The faster the 45-foot project is stabilized, the faster and greater the benefits of reduced O&M costs will be realized.

Funds are also needed for dustpan dredges to work the crossings above New Orleans. These crossings control the draft to eight of our ten major grain elevators. This area caters to the bulk trade and must have a stable channel depth that coincides with the depth at Southwest Pass. Only two dredges in the world can maintain these crossings. At least one more is needed to reliably maintain the current channel. A second dustpan dredge may be needed when the 45-foot channel is extended to Baton Rouge.

The Corps of Engineers is studying the makeup of their "minimum fleet"—the number of dredges the Corps owns and operates. Corps-owned dredges working the Lower Mississippi River are the hopper dredges *Wheeler* and *MacFarland*, and the dustpan dredge *Jadwin*. The *Wheeler* and *MacFarland* provide a much needed capacity and immediate response to keep Southwest Pass opened, especially when the river is abnormally high. To reduce government hopper dredges may drastically diminish the Corps' ability to maintain reliable project dimensions and adversely affect our country's standing in world bulk markets. The *Jadwin* is one of two dustpan dredges in the world capable of working the crossings between New Orleans and Baton Rouge. The loss of this dredge could close the upper river to deep draft ships, causing serious economic repercussions.

For all of the above reasons, we request full funding for the mitigation features of the 45-foot project and for O&M General.

The continuation of the second phase of the 45-foot deep channel into the Port of Baton Rouge is of special importance. It would eliminate the need for different loading criteria for the ports on the Lower Mississippi River. The draft would be more uniform and avoid confusion to foreign shippers and ocean carriers when negotiating charters. This should provide a better posture to promote U.S. export trade through Louisiana. Because of the importance of this project, the state of Louisiana, even with its budget problems, has the funding in place for the Local Cost Sharing Agreement with the Corps of Engineers for this second phase. For these reasons we recommend that federal funding be available when needed to complete this phase of the project.

The growth of the Port of New Orleans depends, in large measure, on the Port's container and ro-ro facilities, the Bulk Handling Plant and other facilities on the Mississippi River-Gulf Outlet. This channel has been severely restricted in depth and width. The funds you have provided have allowed the Corps to improve the channel considerably. Despite the Corps' best efforts, the channel width is still limited primarily because of erosion. This seaway has a project depth of 36 feet. For safety reasons in this narrow channel, restrictions apply to vessels with a draft of 30 feet or more. Such vessels cannot meet or pass in certain areas of this channel, causing delays to the tightly scheduled container vessels using the Mississippi River-Gulf Outlet. These specialty vessels serving the Port's facilities are becoming larger. This channel, with less than stable full project dimensions, causes problems for larger vessels, reducing our ability to grow with the trade.

To improve safety on the Mississippi River-Gulf Outlet, we request Congress appropriate the Corps' full capability for the Mississippi River-Gulf Outlet. In addition, to reduce or eliminate transit restrictions and delays, holding areas should be dredged so large ships can transit without closing the channel to other traffic. There is also the need to resolve the bank erosion problem in this channel. This could reduce cost over the long haul, enhance safety and be environmentally beneficial. We urge approval of the Corps' full capability in GI funds for a Mississippi River-Gulf Outlet bank erosion/riprap study.

The container terminals and the Public Bulk Terminal are located on the Mississippi River-Gulf Outlet. Grain, other bulk facilities, and the general cargo wharves are located on the Mississippi River. An adequate route between the Mississippi River-Gulf Outlet and the river is essential for efficient transit between these facilities. The shortest route is an inefficient, antiquated lock built in the 1920s with a width of 75 feet and limited to a depth of 30 feet. Its maximum capacity has long been exceeded. The average waiting time for passage through the lock has increased from 8 hours in 1985 to about 12 hours at present; however, I am personally aware of waiting time of more than a day in some instances.

A much larger ship lock is necessary to accommodate the size of today's large vessels. We urge that Congress provide the Corps' full capability for this project. This is important if this project is to be completed. Any delays are unthinkable since the new lock is long overdue.

The Red River Waterway, Mississippi River to Shreveport, Louisiana, Project is directly related to our Port. The continuation and completion of this work will stimulate the economy all along the Red River Basin with jobs and additional international trade. This stimulated trade will service the Port of Shreveport and the ports on the Lower Mississippi River, providing needed growth and benefitting the states of Louisiana, Texas, Oklahoma, and Arkansas, which are served through the—Shreveport distribution center. We urge full funding for the completion of Locks and Dams 4 and 5.

Thank you. I appreciate the opportunity to appear before you today.

STATEMENT OF CAPT. JACK LEVINE, JR., PRESIDENT, ASSOCIATED BRANCH PILOTS FOR THE PORT OF NEW ORLEANS

Mr. DUFFY. Mr. Chairman, at this time I would like to request that Capt. Jack Levine, president of the Associated Branch Pilots, present his testimony.

Mr. LEVINE. Thank you, Mr. Chairman.

I am Jack Levine, Jr., president of Associated Branch Pilots, the Bar Pilots for the Port of New Orleans.

In 1992, the bar pilots made 11,387 transits of ocean-going vessels through Southwest Pass. Per your question of are we increasing trade, that is about a 3.5-percent increase over 1991. So it is not a large growth, but it is a nice, steady growth.

Of these ships, over 4,000 were 50,000 deadweight tons or greater, and 669 had a draft in excess of 40 feet. This number of heavily ladened vessels calling on the lower Mississippi River is a direct result of the completion by the Corps of Engineers of the first phase of deepening the channel from 40 to 45 feet.

The pilots strongly support the second phase of deepening the channel to 45 feet to the Port of Baton Rouge. This project would further enhance the importing and exporting capabilities of the largest port in the United States.

This is beneficial both to the State of Louisiana and the entire United States, because it makes the large quantities of petroleum and agricultural products shipped to and from the Mississippi Valley more desirable to increase profitability.

I would also like to briefly comment on the east-west navigation channels near Venice, LA. Tiger Pass and Baptiste Collette provide a shorter, more direct route to Breton Sound in the Gulf of Mexico for offshore supply boats and small tugs and barges.

These channels not only represent a savings in time and money for these vessels, but reduce the traffic in the main shipping channel, the Mississippi River, and its passes, which is one of the most congested waterways in the country.

The Associated Branch Pilots also pilot vessels in the Mississippi River gulf outlet, a manmade tidewater channel 75 miles long, stretching from the Gulf of Mexico to an intersection in the Intercoastal Waterway in New Orleans.

This channel leads to the main container terminals for the Port of New Orleans, the roll-on, roll-off terminal, the Port of New Orleans bulk plant, and additional general cargo docks.

For the Port of New Orleans to remain competitive in the ever-growing container trade, the continued maintenance of this channel is crucial. In 1992, 684 ships called on the Port of New Orleans, using the Mississippi River gulf outlet.

Much is being said pro and con concerning the Mississippi River gulf outlet. There are groups of people supporting the immediate closure of this channel. There are, admittedly, erosion and storm surge problems in the Mississippi River gulf outlet, but any curtailment of shipping traffic in the channel without regard to the long-term effect upon the Port of New Orleans would be disastrous.

I strongly support approval of the funding for both the maintenance dredge/jetty repair project and the erosion/riprap study for the Mississippi River gulf outlet.

I would also like to make a brief statement on behalf of the Mississippi Valley Coal Export Council. Over 28 million tons of coal have been exported from this country using the Mississippi River system during the past 2 years.

The coal miners, the tugboat captains, the barge owners, the shippers, and many other coal-related workers have benefited from using the consistent and efficient Mississippi River system.

Funding of the Corps of Engineers projects in the lower Mississippi River system has proven to be money well spent. It has increased exports and imports that have benefited the entire United States.

I urge your support of the funding requested to enable the Corps to continue to maintain and improve the most efficient and productive waterway system in the country.

Mr. Chairman, this concludes my statement. Thank you for the opportunity to appear before the subcommittee. I will be happy to respond to any questions you may have.

Senator JOHNSTON. Thank you, Captain.

Gentlemen, we are well aware of the importance of the Port of New Orleans and the Mississippi River and I stand in awe of the bar pilots and the branch pilots, and what they are able to do in that river in the midst of all kinds of weather—in daylight and dark.

I have been on those ships, barges, and those tugs, and it is just a mystery to me how you are able to memorize the river and keep those barges going upstream in a high wind and not run into the bank.

If you look up there in Alaska at Prince William Sound, where they had a channel 50 miles wide, and they could not navigate that, and there in the Mississippi River, all these ships going back and forth, and you rarely have a mishap, and never a very, very serious one, it is, I think, really amazing to me how you do it. I do not know how you do it, but it is great.

But in any event, we are going to do the best we can, we expect that to be pretty good, to support the port, and the MR–GO, and your other projects, as we always do. It is important for the country, and it is darn sure important for our state.

So thank you very much, gentlemen.

Mr. DUFFY. Thank you very much, Mr. Chairman, for your support.

[The statement follows:]

STATEMENT OF JOHN LEVINE, JR., PRESIDENT, ASSOCIATED BRANCH PILOTS FOR THE PORT OF NEW ORLEANS

Mr. Chairman:

I am John Levine, Jr., President of the Associated Branch Pilots, the Bar Pilots for the Port of New Orleans, Louisiana.

The Associated Branch Pilots is an Association of pilots that have been guiding oceangoing vessels into the entrances of the Mississippi River system for over 125 years. We are called Bar Pilots because we guide the ships past the constantly shifting and shoaling sand bars in the area.

Southwest Pass of the Mississippi River is the main entrance for deep draft oceangoing vessels entering the Lower Mississippi River System. It is the shallowest stretch of the Lower Mississippi River System and the area that requires the greatest effort by the Corps of Engineers to maintain project depth.

In 1992, the Associated Branch Pilots made 11,387 transits on oceangoing vessels through Southwest Pass. Of these ships, 4,010 were of 50,000 deadweight tons or greater and 669 had a draft in excess of 40 feet.

This number of heavily laden vessels calling on the Lower Mississippi River System is a direct result of the completion by the Corps of Engineers of the first phase of the deepening of the channel from 40 feet to 45 feet.

This first phase has proven to be extremely well designed and well maintained by the fact that the maximum draft recommended by my Association for vessels using Southwest Pass has been 45 feet or greater since May 18, 1989. This is in stark contrast to the late 1970's and early 80's when we often had to recommend drafts less than the project depth due to shoaling.

The Associated Branch Pilots strongly support the second phase of deepening the channel to 45 feet to the Port of Baton Rouge. This project would further enhance the importing and exporting capabilities of the largest port in the United States, whose ranking is determined by cargo tonnage handled.

To the world shipping community, this means that calling at ports on the Mississippi River system will be more profitable because larger ships can enter and carry greater amounts of cargo.

This is beneficial both to the State of Louisiana and the entire United States because it makes the large quantities of petroleum and agricultural products shipped from the Mississippi Valley more desirable due to increased profitability.

I would also like to comment briefly on the East-West navigation channels near Venice, Louisiana. Tiger Pass and Baptiste Collette provide a shorter, more direct route to Breton Sound and the Gulf of Mexico for offshore supply boats and small tugs and barges. These channels not only represent a savings in time and money for these vessels, but reduce the traffic in the main shipping channel, the Mississippi River and its passes, which is one of the most congested waterways in the country.

The Associated Branch Pilots also pilot vessels in the Mississippi River Gulf Outlet, a man-made tidewater channel 75 miles long, stretching from the Gulf of Mexico to an intersection of the Intercoastal Waterway in New Orleans.

This channel leads to the Main Container Terminals for the Port of New Orleans, the Roll On, Roll Off Terminal, the Port of New Orleans Bulk Handling Plant, and additional General Cargo Docks. For the Port of New Orleans to remain competitive in the ever growing container trade, the continued maintenance of this channel is crucial. In 1991, 684 ships called on the port using the Mississippi River Gulf Outlet.

Much is being said pro and con concerning the Mississippi River Gulf Outlet. There are groups of people supporting the immediate closure of this channel. There are, admittedly, erosion and storm surge problems in the Mississippi River Gulf Outlet, but any curtailment of shipping traffic in the channel without regard to the long term effect upon the Port of New Orleans would be disastrous. I strongly support approval of funding for both the maintenance dredging/jetty repair project and the erosion/riprap study for the Mississippi River Gulf outlet.

I would also like to make a brief statement on behalf of the Mississippi Valley Coal Export Council. Over 28 million tons of coal have been exported from this country using the Mississippi River System during the past two years. The coal miners, the tugboat captains, the barge owners, the shippers and many other coal related workers have benefited by using the consistent and efficient Mississippi River System.

Funding of the Corps of Engineers projects in the Lower Mississippi River System has proven to be money well spent. It has increased exports and imports that have benefited the entire United States. I urge your support of the funding requested to enable the Corps to continue to maintain and improve the most efficient and productive waterway system in the country.

Mr. Chairman, this concludes my statement. Thank you for the opportunity to appear before the Subcommittee. I will be happy to respond to any questions the Subcommittee may have.

AMITE RIVER AND TRIBUTARIES

STATEMENT OF ROSS ATKINS, EXECUTIVE DIRECTOR, AMITE RIVER BASIN DRAINAGE AND WATER CONSERVATION DISTRICT

ACCOMPANIED BY JEFF DAVID, PRESIDENT, AMITE RIVER BASIN DRAINAGE AND WATER CONSERVATION DISTRICT

Senator JOHNSTON. Next, we will hear from the Amite River Basin Commission, Ross Barnett Atkins, executive director, and Jeff David, president. It seems as though I have seen these gentlemen somewhere before.

Where would that have been?

Mr. ATKINS. Some campaign trail somewhere.

Thank you, Mr. Chairman. For the record, my name is Ross Atkins, executive director of the Amite River Basin Drainage and Water Conservation District. It is indeed an honor and a privilege to testify before this committee.

We will be brief, Senator. Before I actually get into the main points that I wanted to discuss with you today, I wanted to introduce the president of the Amite River Basin Commission, Jeff David.

Mr. DAVID. Thank you, Ross.

I wanted to touch on a couple of broad concerns that we have as a commission, and then let Ross address our specific concerns.

Our commission comprises six parishes in Louisiana—St. James, Ascension, Livingston, East Baton, East and West Louisiana. The Amite River basin also includes two Mississippi counties—Wilkinson and Amite—where the headwaters of the Amite and Comite Rivers are.

I am, as you know, a resident of Livingston Parish. I am in the newspaper business there and I am also in the radio business in the metropolitan area of East Baton Rouge.

I was struck last night in talking to Mr. Palmer on your staff—and he said, "Well, I know why you are here. You are here to promote Livingston Parish."

Well, of course, I am always ready to promote Livingston Parish, but a point that Ross and I have had a little bit of difficulty getting across to some people in the Amite River basin is that the flooding problems of the Amite River are not a Livingston Parish problem, they are actually predominantly an East Baton Rouge Parish problem.

One fact that a lot of people in East Baton Rouge Parish are unaware is that a drop of rain that falls on the East Baton Rouge Parish courthouse two blocks from the Mississippi River drains not west into the Mississippi, but east into the Amite River.

The entire land area of the East Baton Rouge Parish drains into the Amite River, other than a small portion up near the old Civil War battlefield of Port Hudson. My cousin, the mayor, is very aware of this.

And we have talked to several members of the city council in Baton Rouge, and I think they are becoming more aware that the city was initially built on bluffs along the Mississippi River that were formed by an intrusion of the Amite alluvial plane into the Mississippi, so that the entire East Baton Rouge Parish area drains into the Comite and Amite Rivers, not into the Mississippi River.

As the city has grown over the years, the flooding problems have been addressed on a piecemeal basis with the smaller tributaries. But the city, having grown south and east, predominantly, it has now reached the main tributaries of the Comite and Amite Rivers, so that the drainage problems are now much more extensive to solve than they once were, and are truly beyond the means of any of the local governments in the area, which is the reason why our commission was formed.

Of course, Livingston and Ascension have also grown along with East Baton Rouge, and it is those three parishes where the predominant flooding problems are.

We now have a regional multiparish and even multistate drainage problem that, once again, is beyond the means of local government, so one of the reasons we are here is to ask for some Federal assistance.

The other geological fact that we would like to point out is that the gulf coastal plane, that at one time was Spanish west Florida, runs roughly from Apalachicola, FL, all the way over to the Mississippi River.

And it is characterized by rivers such as the Amite, the Pearl, the Tombigbee, which come from the hills, and drop anywhere from 700 to 1,500 feet down into the gulf, or in our case, into Lake Maurepas and into Lake Pontchartrain.

There are two major centers of population along that gulf coastal plain. One of them is Mobile. I don't have to tell you how much Federal investment has been put into the Tennessee-Tombigbee.

The other is Baton Rouge, where very little Federal investment has been placed. We are here to ask for some increased Federal investment to control some of our flooding problems. The growth and economic prosperity in the future of Baton Rouge very much depends on our controlling the drainage of the Amite River.

Now, I will let Mr. Atkins address some of our specific concerns.

COMITE RIVER DIVERSION PROJECT

Mr. ATKINS. Thank you, Jeff.

Mr. Chairman, there really is one hope that is now becoming a reality that will assist some of our problems, not all of them, and that is the Comite diversion. As you may not know, since 1961, the Amite River basin, which is comprised of about 500,000 people, has experienced 17 floods. That is a flood every other year.

Senator JOHNSTON. I had flown over, was it the flood of 1982——

Mr. ATKINS. 1983.

Senator JOHNSTON. 1983. I had flown over that area in a helicopter.

Mr. ATKINS. That was the flood of record that really changed the way we look at our 100-year flood plain. I think the 1983 flood boggled a lot of minds in FEMA. And the scary thought is that that flood may just be a taste of what is to come.

There is one hope, and that is the Comite diversion canal. As you know, Congress authorized that project last year. We hope construction can begin within the next 2 years.

STATUS OF LOCAL COST-SHARING REQUIREMENTS

But I think there are a couple of problems that may actually jeopardize that project that we respectfully request this committee to consider, and that is, in my understanding, of the 50–50 cost share in the actual project with a local sponsor.

We do not have a local sponsor at this time and we will need to finalize that within the next year or two, or else jeopardize the project as a whole.

We do not need to jeopardize that project because of the fact that the Comite diversion, once it is in place, will alleviate up to 8 feet of flood waters in Baker and East Baton Rouge Parish.

In fact, the Corps has stated just recently that had the Comite diversion been in place before the January of 1993 flood that we would not have had a flood problem. So it is a very vital project that we must continue to see its finalization.

There are two issues that we ought to reevaluate, and that is the 50–50 cost share. If there is a way that the Federal Government could find a way to share more of the financial burden of the project, I think it will make it a lot easier to get a local sponsorship. The project itself will probably cost about $120 million once it is all said and done.

PROJECT MITIGATION AND RECREATION FEATURES

The other aspect of the project which I think would be extremely vital is the recreation mitigation aspect of the project. As of right now, the preliminary mitigation plans call for mitigating land in the Atchafalaya basin.

We feel that mitigation ought to occur within East Baton Rouge Parish and recreation at this time is still an inconsistency within the project.

At first, there was a 5-acre recreational park for the Zachary citizens, and that was taken out, added back in in New Orleans, taken back out again in Washington, so we think that maybe if the right committee chairman can convince some Corps official in Washington to add recreation back in, in a much more substantial manner than it is now, we could do great things for people in East Baton Rouge Parish, as far as recreation.

Our thoughts is to include mitigation and recreation into one, marry those two proposals in one issue, whereas we mitigate within East Baton Rouge Parish, and also add recreation in that project, in the mitigation project. As of right now, the Corps would like to build a bike path along the 12-mile diversion canal, which will cost around $300,000, in today's dollar figures.

We think that that $300,000 could go to much more acceptable use in recreation and other modes outside of a bike path. I do not think there is a whole lot of support locally for a bike path down a canal in North Baton Rouge.

The bicycle sport is not widely used in south Louisiana, unless you run out of gas or have no money. So recreation and mitigation I think could be reevaluated, and be in a manner where Zachary, Baker, and the citizens of Baton Rouge would benefit a lot more.

ANALYSIS OF PREVIOUS FLOOD DAMAGES

Finally, Mr. Chairman, we think that maybe there is a way that this committee could direct the Corps to reevaluate the damage assessments of the past floods in the Amite River basin, particularly the last four or five major floods since 1973.

There really are no accurate figures available today on what is the actual damage. We know what the problems are and we pretty much know what the solutions are, but one thing that is really missing is the cost and the damages that have actually occurred in the floods of 1973, 1977, 1979, 1984, 1990, and this recent 1993 flood.

In fact, in the last two floods, the 1990 and 1993, there is no data. I see no data on this recent flood. And the Corps will readily admit that business losses due to nonaccess to their business, agricultural loss, parish government expenses, overtime, and roads and bridges repair, some of these figures are left out in damage assessments.

And if the Corps could be directed in reevaluating the past damages of the Amite River basin, and perhaps establish a task force where the Amite River Basin Commission could be a part of that task in assisting the Corps, and the end result would really show the citizens of Louisiana and the people of this country that we do, indeed, have a very serious problem in the Amite River basin as far as flooding hazards.

Mr. Chairman, our problems can be best summarized in an excerpt from the report "Flood Problem Areas and Damage Reduction Measures," prepared by the Louisiana Statewide Flood Control Program's Project Evaluation Committee in 1986.

Here is an excerpt from that study, Senator:

> Flooding along the Amite River and its tributaries is the most serious flooding problem in the Mississippi River, Lake Marapot basin. It would take a continuation of coordinated efforts on a large scale to resolve this extremely serious problem.

Mr. Chairman, we thank you for the opportunity to testify before this committee and we realize the efforts that the Corps has participated in in the Amite River basin. We feel like maybe they could do more.

STATUS OF LOCAL COST-SHARING REQUIREMENTS

Senator JOHNSTON. Thank you very much, Ross. How are you coming along with finding a local sponsor? What is the challenge there?

Mr. ATKINS. Well, the original intent of the project itself was for the Amite River Basin Commission to be the local sponsor. Much like any levee board, we had the authority at one point of levying a millage within the boundaries of the watershed.

Over the last decade, there has been a lot of controversy, a lot of political debate on what the Amite River Basin Commission and the State should do to resolve some of these flooding hazards and drainage hazards. The direction has not been clear. So in the end, the taxing authority was taken away.

So at this point, if the state DOTD does not agree to the local cooperative sponsorship of this project—and I think they, the Corps, will need to know that within the next year, and if the Amite River Basin Commission does not have its taxing authority, then the Corps tells me that they will just put the Comite diversion project on the shelf and not readdress it until there is a viable local sponsor.

Mr. Curtis Patterson is sitting right behind me. He could certainly reaffirm some of the points I am making.

Senator JOHNSTON. Do you need legislation to give you the authority you need?

Mr. ATKINS. That is correct. We will spend the next year on a grassroots level building up support and convincing the State lawmakers that we do have a purpose and that with a little help from them, we could not only relieve State and Federal budgets from some of these flood control projects, but we can be a viable special district to the citizens of East Baton Rouge Parish and the rest of the basin.

Senator JOHNSTON. Now, the Comite River diversion project you think will relieve most of your problems; is that correct?

Mr. ATKINS. The Comite diversion canal is primarily designed to relieve flooding in the East Baton Rouge Parish area. The estimates of a 10-year flood, similar to the one we had in January of this year, there would be up to 8 feet alleviation from Baker and

Baton Rouge, and up to about 1 or 1½ in the Denham Springs area, which is not a whole lot of relief.

So Livingston, Ascension, and the upper basin, upper East Baton Rouge Parish, are not going to greatly benefit from the project, but it is a great big step. And it is one that is most promising, since the debate of flooding solutions. We wholeheartedly endorse it and we would like to see it continued, to become a reality.

Senator JOHNSTON. Now, the wet and dry storage up in the north part of the basin, is that on hold now? Are you actively looking for alternatives to those?

Mr. ATKINS. That is exactly what we are doing. We are looking for alternatives, because we cannot wait for the State to give us an idea whether or not they want to pay for it themselves. The Corps, as you know, has already stated that a wet or a dry reservoir is not economically feasible at this time.

We think that the officials at DOTD are evaluating that feasibility study now and should report back to the Corps, I assume, within the next several months, on what their final analysis is on that.

But in the meantime, we are concentrating on what we think is reality, and that is the Comite diversion, and these other water projects within the parish of East Baton Rouge. That will need to be authorized within the next 2 years, also. So, hopefully, we can come back for construction funding.

Senator JOHNSTON. Well, you are not requesting any dollars in this year's budget for Comite, is that correct?

Mr. ATKINS. Well, the dollar amount for this year I think is probably fairly secure.

Senator JOHNSTON. I mean in construction.

Mr. ATKINS. No, no; we will not need construction dollars for about another year or so. Fiscal year 1996, I believe, would be the first year of actual construction dollars.

Senator JOHNSTON. Well, we are aware of the importance of this project, particularly since you have become the director of this commission. And we will continue to follow it with great interest.

I did see that flood firsthand back in 1983 and it was something to behold, the power of that water and the number of people who were displaced by it. And the property damage is really just a tremendous problem, and involves not only property, but peoples' lives.

We would like to respond to that. And I think the Comite is a proper first step toward dealing with that, certainly in the East Baton Rouge Parish. So, we will try to work with you to accomplish the project.

Mr. ATKINS. Thank you, Mr. Chairman.

Senator JOHNSTON. Thank you very much.

[The statement follows:]

STATEMENT OF ROSS ATKINS

Mr. Chairman, my name is Ross Atkins, Executive Director of the Amite River Basin Drainage and Water Conservation District. It is indeed an honor and privilege to testify before this distinguished committee and chairman. I appreciate this opportunity to inform you of the efforts and needs of the citizens of the Amite River Basin to protect against damage and enhance the quality of life in this beautiful region of the State of Louisiana.

The Amite River Basin encompasses about 2,200 square miles in southeastern Louisiana and southwestern Mississippi. Headwaters of the Amite River originate in southwest Mississippi (Amite County) while Lake Maurepas serves as the mouth of the Amite River and its tributaries. In Louisiana alone, the Amite River and its tributary system meanders through six parishes (counties) with a population of over a half million people.

On April 14, 1967, the Senate Committee on Public Works adopted a Resolution sponsored by Senator Russell B. Long and the late Senator Allen J. Ellender authorizing the federal government to determine any needed improvements for flood control and related purposes on the Amite River, Bayou Manchac, and Comite River and their tributaries.

Twenty-five years have elapsed and the U.S. Army Corps of Engineers has initiated and investigated numerous proposals aimed at alleviating flooding and drainage hazards in the Amite River Basin. The reason for such concentration on flooding and drainage reduction is clear. An excerpt from the Report of Flood Problem Areas and Damage Reduction Measures prepared by the Louisiana Statewide Flood Control Program's Project Evaluation Committee in 1986 states: "Flooding along the Amite River and its tributaries is the most serious flooding problem in the Mississippi River-Lake Maurepas Basin . . . it will take a continuation of coordinated efforts on a large scale to resolve this extremely serious problem."

Data from the USGS depicts 17 floods on the Amite River between 1961 and 1993. Major floods occurred in 1973, 1977, 1979, 1983, 1990 and more recently the fourth worst flooding in history occurred in January of 1993. The most devastating flood on record is the flood of 1983. According to the U.S. Army Corps of Engineers' 1992 Amite River and Tributaries Feasibility Study of the Darlington Reservoir, flood damages from the floods are as follows:

1973, $2.1 million, 105,000 acres inundated; 1977, $78 million, 164,000 acres inundated, over 4,000 structures damaged; 1979, $9 million; 1983, $172 million, 357,000 acres inundated, over 5,000 homes and 200 businesses damaged—66 percent urban area; 1990, information not yet available; and 1993, information not yet available. Source: Amite River and Tributaries, Louisiana, feasibility study—US Army Corps of Engineers, New Orleans District.

It is important to note that I personally believe these figures are both conservative and general in nature. The U. S. Army Corps of Engineers has stated that these figures do not include business losses due to closings, loss of wages from lost work time, agricultural losses, or damages to roads, bridges, utilities, and similar costs to municipalities and parishes in flood hazard areas, etc. Moreover, these figures do not represent the damages in the lower Amite River Basin resulting from 6–8 feet higher than normal tidal surges from Hurricane Juan in 1985, or our more recent catastrophe—Hurricane Andrew.

Mr. Chairman, these figures and lack thereof, prompt me to respectfully request that this committee direct the U.S. Army Corps of Engineers (under existing authority) to reevaluate the damage assessments of floods in the Amite River Basin since 1973. Accurate figures from the 1990 flood or any data from the most recent flood of January of 1993 do not exist. This raises a red flag which signals the great possibility all of these figures quoted are in need of reevaluation. Should the Corps be directed to reevaluate damages from past floods, it is my assumption that the dollar figure will be alarming—perhaps as much as a billion dollars in damage has occurred. To ensure a coordinated effort, my suggestion would be to direct the Corps to create a multi-disciplined task force to address the needed efforts to secure accurate damage assessments. Moreover, the Amite River Basin Commission would be an ideal non-federal leader on such a task force. The end results would be a comprehensive report available to governmental agencies and the public which accurately depicts the damages and cost of flooding in the Amite River Basin. Mind you, this is not a proposal to identify the problems or solutions to flooding. We understand these issues. What is clear, is that there is no one source to pursue in seeking the cost of damages.

Flooding in the Amite River Basin is a product of both headwater and backwater overflow of the Amite River and its tributaries associated with heavy rainfall. Urban and stormwater runoff are also major contributing factors to flooding and drainage hazards. The recent floods on record indicate heavy rainfall from 7–13 inches over a 3–5 day period becomes the main culprit of major flooding and drainage hazards within the Basin. Saturation of the ground only compounds the hazards in periods of extended rainfall. As a native of Louisiana who understands the climatic conditions of the State as well as anyone, the distinguished chairman of this committee is familiar with the conditions described . . . conditions which are as common in Louisiana as spicy foods and humid nights. The USGS estimates the following recurrence interval of past floods:

1973, 7 years; 1977, 42 years; 1979, 10 years; and 1983, 45 years. Source: Amite River and Tributaries, Louisiana, feasibility study—US Army Corps of Engineers, New Orleans District.

However, in the past three years (1990–1993) the Amite River Basin has experienced the third and fourth worst floods on record. In fact, the experts inform me that the climatic data compiled over the past 50 years indicate an entrance into a wetter period. For the reasons discussed above, this serves as my early warning that the worst is yet to come. Flooding and drainage devastation in the Amite River Basin will continue and cause much more extensive damage to the region. This is certain if only for the simple fact that economic development and residential growth in the region is increasing and will continue to expand in the future. May I also add that it is a given that it will continue to rain in south Louisiana.

Proper floodplain management, an integral part of the solution, yet a highly debatable and emotional topic, has many discrepancies in data and uncertain policy implementation. Yet, in response to federal, state and local mandates, certain forms of floodplain management are being implemented in the basin.

Perhaps the federal government should review Section 206 of the 1960 Flood Control Act (PL 86–646) as amended by the 1960 and 1970 Flood Control Acts, the Water Resources Development Act of 1974 and Executive Order 11296, August 10, 1966, to ascertain whether the authorization established in these acts which provide the Corps of Engineers the right to establish and carry out a floodplain management service program is in need of a full review. Eventually, our governmental system should streamline or more clearly define the proper procedures of floodplain management. Moreover, we should define which agency should act as the lead in administering the floodplain management program. In the meantime, the Amite River Basin's flooding and drainage hazards will be forced to continue to rely on flood control projects as the primary force in combating our frequent flooding conditions.

Since the 1967 authorization to determine flood control improvements in the Amite River Basin, the U.S. Army Corps of Engineers has planned and approved several projects which are near reality. However, there are some existing and potential problems which could defer action on these projects. Some of these problems are local and some, I hope this committee can investigate to determine if federal intervention could keep the projects on line.

Mr. Chairman, this now becomes the central platform of my message and plea for you and this committee to assist in the efforts to minimize loss and trauma caused by our flooding problems in the Amite River Basin. Our first real hope for solutions to our problems is the Comite River Diversion Canal. A 12 mile diversion of high water from the Comite River into the Mississippi River was authorized by Congress last year. This project, which is anticipated to cost in excess of $100 million, will serve as a major relief to the lower Comite while providing a significant relief to the main channel of the Amite River. The Corps informs me that as much as 8 feet of water would be diverted from the citizens of East Baton Rouge Parish when the canal is completed. In fact, the Corps is on record as stating that the recent flood in January of this year would have been almost entirely avoided had the canal been functioning at the time. Clearly, we must vigorously pursue the construction and completion of this vital project. It is a sobering thought to note that over 1,000 homes in East Baton Rouge parish would have been protected in this recent flood had this project been in place.

The status of the Comite Diversion is now in the Preliminary Engineering Design (PED). However, the project as a whole is in jeopardy. A local cooperative agreement has not been formalized and this is due in part to the fact that the entire project is on a 50-50 cost-share basis. I believe this cost-share percentage is too demanding for a local sponsor. It is and will be extremely difficult for a local entity to engage in the financial responsibility of a project of this magnitude which will cost them in excess of $50 million per the existing cost-share percentile. Mr. Chairman, I therefore respectfully request that this committee investigate the possibility of changing the 50-50 cost-share to a more acceptable and reasonable financial burden to the potential local sponsor. It is my thought that a 90–10 would be the most desirable percentile. However, any improvement in the current system would ensure the project can continue to final stage. Furthermore, it has been brought to my attention that the 50–50 cost-share of this project is rather unusual when compared to other public works projects around the country.

I respectfully request that the entire concept of mitigation and recreation on the Comite Diversion be reevaluated. More specifically, it is my belief that mitigation and recreation can be combined within the same designated site. As it stands now, the Corps is evaluating mitigation outside the parish of the Diversion Canal and recreation has been substantially reduced. Mitigation should be within close proximity of the project and the site of the original impact. Furthermore, there is local reservation of the current proposal for recreation. Bike paths along the canal is the Corps' initial suggestion for recreation at a cost of approximately $250,000. A five-acre park has been a past recommendation of the New Orleans District Corps of Engineers, however Corps headquarters has removed this section on more than one occasion. The more acceptable alternative to the current mitigation-recreation equation from a local standpoint, would be to eliminate the proposed bike path and marry mitigation and recreation into an acceptable site within close proximity to the municipalities of Baker, Zachary and Metro-Baton Rouge. The end results would be a vast area of protected land with community access to some type of recreational complex. I envision a project which local and State governing bodies would endorse wholeheartedly and maintain in response to cooperation from the federal government.

As the Comite Diversion Canal proceeds with final design it is imperative from both an environmental and benefit standpoint that the water from the canal is drained into the Mississippi River Channel. I mention this as the Corps continues to analyze the final destination of the water once it completes its diversion path from the Comite River. It is clear that this water should not drain in fragile habitat nor should it interfere with existing and potential industry in the area. I just want to be on record in support of full diversion into the Mississippi River.

Please investigate and utilize the influence of this committee to ensure the citizens of the Amite River Basin will realize a flood control project which will also sustain and enhance environmental and recreational benefits to the communities.

Mr. Chairman, there are many other much needed solutions to the flooding and drainage problems in the Amite River Basin. The Corps is evaluating many proposals and the Amite River Basin Commission will continue to work closely with the Corps in addressing long-term solutions.

In summary, we request that a directive be enacted formulating a task force in reevaluating damage assessments of the floods in the Amite River Basin since 1973. The 50-50 cost-share of the Comite Diversion Canal should be changed to alleviate financial burden on the local sponsor of said project. Finally, mitigation and recreation of the Comite Diversion project should be inclusive and enhanced toward a more local endorsement.

I want to personally thank the chairman and this committee for allowing me to testify before you today. This committee and its honorable chairman have always proven their concern for citizens and flooding problems in this country. The Amite River Basin Commission, the citizens of the Amite River Basin, and the State of Louisiana are forever grateful for your past and future efforts.

I would be happy to answer any questions now or at a later time.

Thank you.

CORPS MINIMUM DREDGE FLEET

STATEMENT OF WITT BARLOW, PRESIDENT, NATIONAL ASSOCIATION OF DREDGING CONTRACTORS

ACCOMPANIED BY MARK SICKLES, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF DREDGING CONTRACTORS

Senator JOHNSTON. Next, we have the National Association of Dredging Contractors, Mr. Witt Barlow, president, and Ben Cottrell, vice president. As you can see, we are getting well behind schedule, so if you will briefly summarize if you can.

Mr. BARLOW. Thank you, Mr. Chairman. We will try to be concise.

My name is Witt Barlow. I am here this morning representing the National Association of Dredging Contractors, the primary trade association of the U.S.-flag dredging industry, and an organization in which I serve as president.

With me, to my left is Ben Cottrell, president of Cottrell Engineering Corp. of Chesapeake, VA. Cottrell Engineering is a member of NADC as well as the American Association of Small Dredging and Marine Construction Companies. Accompanying us is NADC's executive director, Mark Sickles.

Our association's members perform approximately 75 percent of the maintenance dredging contracts advertised by the Corps of Engineers, 100 percent of the private hopper dredging work, and practically all of the Corp's capital port construction and beach nourishment work.

I am also president and CEO of the Great Lakes Dredge and Dock Co. of Oak Park IL. We maintain regional offices around the country, including a gulf coast regional headquarters in Metairie, LA, and we own and operate a major yard in Houma.

There are four topics we would like to briefly discuss with you today: funding for the Corps' "Operation and maintenance" account, the promise of dredging for wetlands and habitat creation, the Corps' successful shore and beach nourishment program, and finally, the state of the private hopper dredge industry, which you were instrumental in assisting with last year.

We appreciate your past support for these programs, each of which contributes to the Nation's welfare, and each of which deserves your continued interest.

STATEMENT OF BEN COTTRELL, VICE PRESIDENT, NATIONAL ASSOCIATION OF DREDGING CONTRACTORS

Mr. COTTRELL. Good morning, Mr. Chairman.

I would like to say a few general words about funding the Corps' operation and maintenance program. The modest growth of the O&M account has not kept pace with inflation. At the same time, projects continue to be added to the inventory.

Additionally, many projects now have environmentally generated requirements or constraints which increase the cost of doing business.

While we endorse the policies designed to protect and enhance our environment and welcome the challenge to design equipment and develop procedures for compliance, we regret that the associated increase in costs results in the execution of dredging work as budgets are fixed.

Although the Corps does well in balancing priorities, deferred maintenance in the end is the result of trying to do more with less.

OPERATION AND MAINTENANCE FUNDING

In 1988, the O&M account reached $1.4 billion for the first time. In 1989, it was reduced by 2.2 percent, as inflation grew by 4.4 percent. In 3 out of the next 4 years, the account grew at less than the rate of inflation.

If the O&M account had grown at the rate of inflation each year since 1988, it would be $179 million higher this year than the actual amount appropriated.

Mr. Chairman, this funding is vital to the timely maintenance of the U.S. port and waterway system and, therefore, the Nation's ability to compete internationally. Dredging technologies are being used more often to create or restore degraded wetlands.

WETLAND RESTORATION DREDGING

This July, the first large dredging project in Louisiana, intended solely for the purpose of restoring marsh at Bayou LeBranch, will be bid.

Recently, my company built a 32-acre wetland in the Anacostia River watershed, right here in the District of Columbia. This project is intended to help clean the Chesapeake's most polluted tributary by utilizing natural wetlands functions. In general, there are ample opportunities to put our services to good use on behalf of the environment.

BEACH NOURISHMENT ACTIVITIES

The recent storms this winter on the Atlantic and gulf coasts have demonstrated the need for beach nourishment and dune restoration projects. Those communities with established beach renourishment programs escaped hundreds of millions of dollars in damages over the past 2 years alone.

With the growth of the Corps' shore protection program, the dredging industry has become more efficient in working in the ocean environment and our prices have steadily decreased.

Beach nourishment is the lifeline for many coastal economies, from both a business and a survival standpoint. These projects are an important part of the Nation's infrastructure and should be regarded as such in our public investment programs.

Examples of projects funded by this committee which have saved the lives of citizens and communities in the recent storms include Miami, FL, Ocean City, MD, Sandy Hook, NJ, and parts of New York City.

HOPPER DREDGE WORKLOAD

Finally, Mr. Chairman, I want to take this opportunity to thank you for your leadership in allowing the private U.S. hopper dredge industry to prove its capability by putting out for bid 7.5 million cubic yards of dredging, previously done by the Corps fleet. We are grateful for your support and look forward to competing for the work.

We are also pleased with the good faith effort made by the Corps headquarters to implement this provision. We will communicate closely with this subcommittee to keep you abreast of the situation throughout the remainder of the year.

UNUSED PRIVATE INDUSTRY HOPPER DREDGE CAPACITY

The private industry still has significant unused hopper dredge capacity, which can be utilized by the Corps to further reduce their overall costs.

We have demonstrated our ability to generate savings and ask for a greater opportunity. In 1992, for example, the Government's fair and reasonable estimate for 33 advertised hopper dredge contracts totaled $62 million. Industry collectively bid this work for $53 million, with its fleet of 14 dredges, a savings of $9 million.

The Corps, on the other hand, has four hopper dredges, which cost at least $45 million annually to operate. They do not compete for the work, it is simply set aside for them. Although the Corps estimates industry's annual hopper dredging capacity at 100 million cubic yards, a figure we believe is conservative, industry successfully bid only 40 million cubic yards in 1992, while the Corps reporting dredging 22 million cubic yards with their dredge plant.

Industry has demonstrated the capability and the expertise to do all the Government's work at a savings to the taxpayer, if given the opportunity. If the Corps is to maintain dredges, we suggest they be used to back up industry in a reserved status.

Alternately, perhaps they could be stationed at strategic overseas naval installations, ready for emergency deployment in support of military activities.

We would like to work with you, Mr. Chairman, to further the progress made last year in examining the need to continue the Government's minimum fleet in its current costly active status.

Thank you for your attention. We would be happy to answer any questions.

Senator JOHNSTON. The Port of New Orleans testified a few moments ago that they needed another dustpan dredge down there. What is the word on that?

Mr. BARLOW. With the deepening of the Mississippi River channel to 45 feet, the Corps believes another dustpan dredge is required. We are working with the Corps to be allowed to bid for that work and build a dredge ourselves. We have been working with the Corps as part of our minimum fleet program to try to bid more for the dustpan work that they do put out.

Industry has one dustpan dredge. There is only one contract that the Corps bids competitively, and allows us to compete on. If they were to allow us to compete on all the work, we would supply the plant, as we did in the seventies, when the Corps' fleet was reduced from 16 hopper dredges to 4.

Mr. SICKLES. If I could add to that, Mr. Chairman. The New Orleans District operations division has a plan that they are trying to get approved up through the system to allow the private sector to build the next one or two dustpan dredges, depending on how many are needed.

It is in dispute. The Corps testified that they needed two. The Corps is not sure that they do need two at this time. They may need up to two, depending on how much new maintenance is required after the channel is deepened to Baton Rouge.

Senator JOHNSTON. Thank you very much, gentlemen.

Mr. BARLOW. Thank you, Mr. Chairman.

[The statement follows:]

JOINT STATEMENT OF WITT BARLOW AND BEN COTTRELL

Good morning. My name is Witt Barlow. I am here this morning representing the National Association of Dredging Contractors, the primary trade association of the U.S.-flag dredging Industry and an organization which I serve as president. With me is Ben Cottrell, Vice President of Cottrell Engineering Corporation of Chesapeake. Virginia. Cottrell Engineering is a member of NADC as well as the American Association of Small Dredging and Marine Construction Companies. Accompanying both of us is NADC's Executive Director, Mark Sickles. Our Association's members perform approximately 75 percent of the maintenance dredging contracts advertised by the U.S. Army Corps of Engineers. 100 percent of the private hopper dredge work, and practically all of the Corps' capital port construction and beach nourishment work. I am also President and CEO of the Great Lakes Dredge & Dock Company of Oak Brook, Illinois.

Mr. Chairman, there are four topics we would like to briefly discuss with you today: funding for the Corps' Operations & Maintenance Account; the promise of dredging for wetlands and habitat creation; the Corps' successful shore and beach protection program; and, finally, the state of the private hopper dredge industry which you were instrumental in assisting last year. We appreciate your past support for these programs each of which contributes to the Nation's welfare and each of which deserves your continued interest.

BEN COTTRELL. Good morning Mr. Chairman. I would like to say a few general words about funding the Corps' operations and maintenance program. The modest growth of the O&M Account has not kept pace with inflation. At the same time projects continue to be added to the inventory. Additionally, many projects now have environmentally generated requirements or constraints which increase the cost of doing business. While we endorse the policies designed to protect and enhance our environment, and welcome the challenge to design equipment and develop procedures for compliance, we regret that the associated increased costs result in the execution of less dredging work as budgets are fixed. Although the Corps does well in balancing priorities, deferred maintenance is the end result of trying to do more with less.

In 1988, the O&M Account reached $1.4 billion for the first time. In 1989, it was reduced by 2.2 percent as inflation grew by 4.4 percent. In three out of the next four years, the account grew at less than the rate of inflation. If the O&M Account had grown at the rate of inflation each year since 1988, it would be $179 million higher this year than the actual amount appropriated ($1.721 billion vs. 1.541 billion actual appropriation). Mr. Chairman, this funding is vital to the timely maintenance of the U.S. port and waterways system and, therefore, the Nation's ability to compete for international trade.

Dredging technologies are being used more often to create or restore degraded wetlands. This July, the first large dredging project in Louisiana intended solely for the purpose of restoring marsh at Bayou La Branche will be bid. Recently, my company built a 32-acre wetland in the Anacostia River watershed right here in the District of Columbia. This project is intended to help clean up the Chesapeake's most polluted tributary by utilizing natural wetlands functions. In general, there are ample opportunities to put our services to good use on behalf of the environment.

WITT BARLOW. The recent storms on the Atlantic and Gulf coasts have demonstrated the need for beach nourishment and dune restoration projects. Beach nourishment is the lifeline for many coastal economies from both a business and survival standpoint. Those communities with established beach renourishment programs escaped hundreds of millions of dollars in damages over the past two years alone. With the growth of the Corps' shore protection program, the dredging industry has become more efficient at working in ocean environments and prices have steadily decreased. These projects are an important part of the Nation's infrastructure and should be regarded as such in our public investment programs. Examples of projects funded by this committee, which have saved the lives of citizens and communities in the recent storms include, Miami, Florida; Ocean City, Maryland; Sandy Hook, New Jersey and parts of New York City.

Finally, Mr. Chairman, I want to take this opportunity to personally thank you for your leadership in allowing the U.S. hopper dredge industry to prove its capability this year by putting out for competitive bid 7.5 million cubic yards of dredging done previously by the Corps' fleet. We are grateful for your support and look forward to competing for the work. We are also pleased with the good faith effort made by the Corps' headquarters to implement this provision. However, we remain concerned that the full 7.5 mcy may not materialize by the end of the year. We will communicate closely with this Subcommittee to keep you abreast of the situation throughout the remainder of the year.

The private industry has significant unused hopper dredge capacity which can be utilized by the Corps to further reduce their overall costs. We have demonstrated our ability to generate savings and ask for greater opportunity. In 1992, for example, the government's fair and reasonable estimate for the 33 advertised hopper dredge contracts totaled $62 million. Industry collectively bid this work for $53 million with a fleet of 14 dredges, a savings of $9 million. The Corps, on the other hand, has four hopper dredges which cost over $45 million annually to operate. They do not compete for the work which is simply set aside for them. Although the Corps estimates industry's annual hopper dredging capacity at 100 million cubic yards, industry was allowed to bid only 40 mcy in 1992 while the Corps reported dredging 22 mcy with their dredge plant. In summary, Industry has demonstrated the capability and has the expertise to do all the Government's work at a savings to the taxpayer, if given the opportunity. If the Corps is to maintain dredges, they should be used to back industry up in reserve status, or alternately they could be stationed at strategic overseas U.S. Naval installations ready for emergency deployment in support of military activities. We would like to work with you, Mr. Chairman, to further the progress made last year in examining the need to continue the government's minimum fleet in its currently costly active status.

Thank you for your attention. We would be happy to answer any questions that you may have.

MISSOURI RIVER FISH AND WILDLIFE MITIGATION PROJECT

STATEMENT OF GARY CHRISTOFF, ENVIRONMENTAL COORDINATOR, MISSOURI DEPARTMENT OF CONSERVATION

Senator JOHNSTON. Finally, we have the Missouri Department of Conservation, with Mr. Gary Christoff.

Mr. CHRISTOFF. Thank you, Mr. Chairman. There are not too many of us left in the room now. Maybe that is good.

Mr. Chairman and members of the subcommittee, I thank you for the opportunity to again appear before you. I am Gary Christoff, an environmental coordinator with the Missouri Department of Conservation.

I am pleased to be here to speak on behalf of the U.S. Army Corps of Engineers, the Missouri River fish and wildlife mitigation project.

We, the States of Iowa, Kansas, Nebraska, and Missouri are grateful for the commitment of the subcommittee for completion of the project. I am pleased to report to you that previous appropriations for planning, engineering, design, and construction have been well spent.

The first development project was in my State of Missouri, which was an enhancement of the fish habitat in a side channel on the Missouri River, and improvements to a fish spawning area.

Similar projects are scheduled for the future and are very important, as the States of Nebraska and Missouri recently found it necessary to curtail commercial fishing for catfish in the Missouri River due to declining populations.

The first land acquired as part of the mitigation effort was recently purchased in Kansas. The area will be managed for wetland species, both fish and wildlife, and will make a significant contribution to the region's biological diversity. Other land acquisitions are in the offing, which will also greatly enhance that diversity.

The mitigation project has developed into a strong alliance between the States and the Federal agencies. The coordination team meets quarterly and is very effective in identifying significant habitat improvement sites along the river. The Corps staff has been very aggressive in evaluating those projects. Project success is due to a strong commitment of all the players, as supported by this subcommittee.

Mr. Chairman, it is very important to the Missouri River and the thousands of people who use and enjoy it that appropriations for the project continue. During a 4-year survey by the Missouri Department of Conservation, we determined that recreationists made an estimated 2.5 million visits to the Missouri River and spent 12.6 million hours at a wide variety of pursuits.

For this recreation, on the 553 miles of the Missouri River in Missouri, the net consumer surplus, and that is the amount they are willing to pay to use the river above their actual cost was $1.9 million per year.

While we recognize that full project completion will result in only a 7- to 10-percent restoration of habitats, even that amount strongly reflects public desires for environmental improvements.

Thus, it is our request that the subcommittee make an appropriation equal or as close as possible to the Corps of Engineers' construction capabilities.

Mr. Chairman and members of the committee, again, I thank you for the opportunity to appear before you. And I trust that you will concur in the benefits of the fish and wildlife mitigation project, and look at the Corps' budget request with some positive thoughts.

Thank you.

Senator JOHNSTON. Thank you very much, Mr. Christoff.

[The statement follows:]

STATEMENT OF GARY CHRISTOFF

Mr. Chairman, members of the subcommittee, thank you for the opportunity to again appear before you. I am Gary Christoff, Environmental Coordinator with the Missouri Department of Conservation. I am pleased to be here to speak on behalf of the U.S. Army Corps of Engineers, Missouri River Fish and Wildlife Mitigation Project. We, the states of Iowa, Kansas, Nebraska and Missouri are grateful for the commitment of the subcommittee for completion of the project.

I am pleased to report to you that previous appropriations for Planning, Engineering, Design and Construction have been well spent. The first development project was in my state of Missouri, enhancement of fish habitat in a side channel of the Missouri River and improvements to a fish spawning area. Similar projects are scheduled for the future and are very important as the states of Nebraska and Missouri recently found it necessary to curtail commercial fishing for catfish in the Missouri River due to declining populations.

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The mitigation project has developed into a strong alliance between the states and federal agencies. The Coordination Team meets quarterly and is very effective in identifying significant habitat improvement sites along the river. Corps of Engineers staff has been very aggressive in evaluating the projects put forward. I believe project success is due to the strong commitment of all players, supported by this subcommittee.

Mr. Chairman, it is very important to the Missouri River and the thousands of people who use and enjoy it, that appropriations for the project continue. During a 4 year survey by the Missouri Department of Conservation, we determined that recreationists made an estimated 2.5 million visits to the Missouri River and spent 12.6 million hours at a wide variety of pursuits. For this recreation on the 553 miles of Missouri River in Missouri, the net consumer's surplus, i.e. the amount they are willing to pay above their actual cost, was $1.9 million per year. While we recognize that full project completion will result in only a 7–10 percent restoration of habitat, even that amount strongly reflects public desires for environmental improvements. Thus, it is our request that the subcommittee make an appropriation equal, or as close as possible, to the Corps of Engineers construction capabilities.

Mr. Chairman, members of the committee, again I want to thank you for the opportunity to appear before you. I trust you will concur in the benefits of the project and approve the Corps' budget request for the Fish and Wildlife Mitigation Project.

STATEMENT OF FRED L. PALMER, MAYOR, VALLEY PARK, MO

Senator JOHNSTON. And finally, we will hear from Fred L. Palmer, who is the mayor of Valley Park, MO.

Mr. PALMER. Mr. Chairman and distinguished members of the subcommittee, we again appreciate the opportunity to be heard. And we also thank Senator Danforth for taking his valuable time to come down and testify on our behalf.

It is again our real pleasure to appear before you today on behalf of the citizens of Valley Park, MO, which is a small community in southwest St. Louis County. As you know, we have suffered through repeated floods for over 100 years of review by the Army Corps of Engineers.

Now, again, thanks to you, we are on the verge of realizing our dream of never again having to face the terrible devastation of flood waters created from the Merrimac River.

With me today, Mr. Chairman, are my wife, Jill, the president of our board, Alderman Don Carroll, the chairman of our Public Works Commission, Alderman Gary Adams. Mr. Eric Martin, who is seated with me, is our city attorney, and the youngest member of our contingent, Zachary Martin, who is approximately 6 years old.

We are appearing today in support of the Corps of Engineers' stated capability figure for construction general funds to be used for the continuing design in initiating actual construction of our levee.

I am not going to present to you data or photographs, but the people accompanying me have brought written testimony that we would ask that that be entered into the record, because you are aware of the past devastation of the floods and the human suffering that our people have endured for these many years.

I do, however, want to take the opportunity to thank you, each and every one of you, for the many courtesies shown us when we have come to town to testify before you. I would like to also express our gratitude to your outstanding staff members, Proctor Jones and David Gwaltney.

Above all, on behalf of the men, women, and children who live, work, and go to school in our town, I thank you for your continued support, and your having appropriated funds to plan, design, and now to build our levee.

Once again, we are very grateful and thankful.

Senator JOHNSTON. Thank you, Mayor. We are very familiar with this project. It has a long history, as you know, of some controversy back there in the old days.

I am glad we are finally in the process of getting the project built and getting the levee where it will provide some flood protection for you. We will do the best we can to expedite that project this year.

Mr. PALMER. Thank you, Senator. We appreciate it.

[The statements follow:]

STATEMENT OF FRED PALMER, MAYOR OF VALLEY PARK, MO

Mr. Chairman and distinguished members of the subcommittee, it is again a real pleasure to appear before you today, on behalf of the citizens of Valley Park, Missouri. As you know, we have suffered through repeated floods for over 100 years of review by the Army Corps of Engineers. Now, thanks to you, we are on the verge of realizing our dream of never again having to face the terrible devastation of floodwaters from the Meramec River. We are appearing today in support of the Corps of Engineers' stated capability figure for Construction-General funds to be used for continuing design and initiating actual construction of our levee. We believe that the figure will be approximately $3,500,000, and if it is larger, than we support the higher amount of funds, so that our levee will become a reality at the earliest possible date.

I am not going to present data or photographs describing the terrible, past havoc wreaked by our numerous floods, for you are well aware of the damages and the human suffering our people have endured for these many years. I do, however, want to take this opportunity to thank you, each and every one of you, for the many courtesies shown us when we have come to town to testify before you. I would like to also express our gratitude to your outstanding staff members, Proctor Jones and David Gwaltney. Above all, on behalf of the men, women and children who live, work and go to school in our town, I thank you from the bottom of my heart for your support, your caring and your having appropriated funds to plan, design and now to begin building our levee. It will mean so much to our area, and we are eternally grateful to you.

STATEMENT OF DONALD L. CARROLL, ALDERMAN, VALLEY PARK, MO

Mr. Chairman, thank you again for providing us with a forum to request continued funding for the Valley Park, Missouri, levee project. As I have lived there all of my life, I can recall many floods and the devastation they work on the community.

I urge you, on behalf of my constituents and family, to authorize funding up to the full stated capability of the Army Corps of Engineers. With land purchases being consummated, your appropriation will insure that flood protection is achieved.

I thank you for the courtesy extended to our delegation by your staff and yourselves.

STATEMENT OF ERIC M. MARTIN, CITY ATTORNEY, VALLEY PARK, MO

Mr. Chairman and members of the subcommittee, on behalf of my client I urge you to continue funding this important project to this community of over 4,000 residents, representing well over 30 million dollars in tax assessed value. The City continues in its efforts to acquire land to accommodate the construction of this project.

I request that you fund this project up to the stated capability of the United States Army Corps of Engineers. I thank you for your past support and funding for this project and look forward to continuing our efforts toward construction.

STATEMENT OF GARY L. ADAMS, ALDERMAN, VALLEY PARK, MO

Mr. Chairman, I am pleased to be able to have this opportunity to submit a third written testimony on the Valley Park flood control project 97–128. I am writing in order to save your committee valuable time on such an important project.

Last year we submitted letters to the United States Congress and Senate supporting this project and we spoke of the 1982 and 1983 flood which tore our small southwest St. Louis county town apart. Since that time this same little St. Louis county town known as Valley Park has picked itself up and is ready to meet the needs of its strong and tenacious citizens.

The year 1993 is a landmark for the City of Valley Park; construction of the closure structures are to begin in August of 1993, properties have been acquired, all local agreements are in place, and growth within the community is on the move.

We urge for the continued support of the house and the senate on project 97–128, as this project will help create jobs, which are needed in todays economy, as well as protect lives and property in Valley Park. Keep in mind that this project is a win-win project for everyone.

Please help us continue to help ourselves by supporting this project at your level. Help make this small southwest St. Louis county community strong and self supporting again. The citizens of Valley Park, Missouri, as well as myself, would appreciate anything you and your committee can do to continue the funding of project 97–128.

Thank you once again for your time and consideration.

STATEMENT OF THE VALLEY PARK, MO, FIRE PROTECTION DISTRICT

Mr. Chairman, the Board of Directors of the Valley Park Fire Protection District of Saint Louis County urges your continued support of the Valley Park Flood Control Project, Lower Meramec Valley. Much of our Fire District lies within the Valley Park area, and our present firehouse is within the flood plain area.

The lack of a levee and the flood control impacts the Fire District's ability to provide emergency services, both fire and ambulance, to the residents of the Fire District, each time the City of Valley Park floods.

The flooding in the Fire District, of course, creates an immediate need for emergency rescue of a portion of the population by emergency vehicles and boats, and the temporary abandonment, by those rescued, of their homes, clothing, furniture and possessions. On those occasions, the capacity of the District to respond to the emergency needs, are strained. Flooding causes slower response times, both to fire and rescue/ambulance related calls. The servicing of those immediate needs correspondently creates a diminishing ability to provide services to the population in other areas of the District not affected by the flood.

The flood control project under consideration would, of course, mean an alleviation from the threat of floods and would relieve the Fire District from stretching its resources during those times of the year previously threatened by rising water. The construction of the levy would create for the Fire District a more stable tab base and would make available for development land in the flood plain which has been bypassed for years because of the flood problem.

We urge you to recommend the appropriation of funds as recommended by the Army Corps of Engineer.

ADDITIONAL PREPARED STATEMENTS FOR THE RECORD

Senator JOHNSTON. The subcommittee has received several additional statements which, without objection, I will make part of the record at this point.

[The statements follow:]

STATEMENT OF THE UPPER MISSISSIPPI FLOOD CONTROL ASSOCIATION

SUMMARY AUTHORIZED PROJECTS UNDER PUBLIC LAW 99–662

Projects	Estimated costs—		Budgeted fiscal year 1994	Requests	Remarks
	Federal	Non-Federal			
South Quincy Drainage and Levee District, IL (FC).	$7,155,000	$2,395,000	....	....	Completed.
Green Bay Levee and Drainage District No. 2, Iowa [1].	5,760,000	1,920,000	Unknown	....	Reauthorized
Muscatine Island Levee and Drainage District, Muscatine Louisa Co. Drainage District No. 13, Iowa (C).	6,450,000	2,150,000	Not represented by our association.	....	See discussion.

[1] Not updated.

NOTE.—FC, flood control; C, construction.

Three of our twenty-four Member Districts were recommended for increased flood protection under P.L. 99–662. They are the South Quincy Drainage and Levee District, Illinois; Green Bay Levee and Drainage District No. 2, Iowa; and Muscatine Island Levee District and Muscatine Louisa County Drainage District No. 13, Iowa.

A brief status report is as follows:

South Quincy Drainage and Levee District flood control project.—This project has been completed as reported in 1991.

Our Association is happy to report that since the completion of this Flood Control project at a federal cost of approximately $6,000,000 and a sponsor cost of approximately $2,250,000, there has been ongoing industrial expansion in excess of $35,000,000 and ongoing infrastructure improvement. (Sewer, Water, etc.), in excess of $1,200,000 for Phase 1, total phased work $6,000,000.

This is a return on federal investment on a ratio of 6:1 in two years and approximately 7:1 within the very near future.

The Green Bay Levee and Drainage District No. 2, Iowa, flood control project.—This project has been reauthorized as set forth in Water Resources Development Act 1992 (WRDA 92), HR 6167.

Since this project has lain dormant for over five years, it would appear necessary to conduct a general re-evaluation of all aspects of the project.

The Drainage District has agreed to cost share in the project.

We respectfully request an appropriation of $250,000 to conduct the study in fiscal year 1994.

The Muscatine Island Levee District, Muscatine-Louisa County Drainage District No. 13, Iowa, and the Muscatine City-Muscatine Island Flood Control Commission.—This project is herein referenced because it constitutes one of the three projects recommended for improvement under PL 99–662 and at that time was an active member of our Association.

Our Association is no longer privy to speak for this project and therefore have no comment to make.

SPECIAL STUDIES

South River Drainage District (Missouri).—The South River Drainage District, in conjunction with the Marion County Missouri Port Authority in 1991, requested a Reconnaissance Survey by the C.O.E. to determine the feasibility of raising approximately 7.2 miles of the South River Mississippi River Levee to afford increased protection to approximately 10,000 acres of agricultural land and access to the American Cyanamid Plant, a large industrial plant, and other industrial park facilities. The improved levee would afford protection to a proposed barge terminal port facility.

The Reconnaissance Survey by the Corps of Engineers of the Rock Island District is still under review.

We understand that there is a question whether or not "Lost Labor" constitutes a viable factor in cost/benefit analysis. Since the State of Missouri and Marion County Missouri are interested in constructing a Port Facility within the South River Drainage District, such a facility should enhance the general economy of the area.

One would expect this to lead to employment and the general well being of the area.

If this South River Flood Control project even remotely returns a Federal Investment ratio approaching that of the South Quincy project, it will prove to be a boon to the area's economy and a stimulus to employment.

Upper Mississippi River navigation study.—Our Association is very interested in the Navigation Study. An efficient, well managed, adequate inland waterway is vital to the economic and social well being of the entire Upper Mississippi River Valley.

We recognize that the navigation system is some 50 years old and many of the Lock Facilities are in need of repair or replacement.

Double lockage problems with large barges cause time delays.

The need for greater and more efficient lockages will undoubtedly occur. Our Association believes that barge traffic will increase as the years go by. This nation cannot become static, it must grow.

We respectfully request that your Honorable Committee continue to fund this Study to the full capability of the C.O.E.

Our Association is agricultural in nature and as such have a primary interest in getting grain to the market and return commodities upstream as economically as possible.

We are concerned that too high fuel cost to the Barge Industry will result in a tax on agriculture. Most of the cargo up and down the river is agriculturally related or directly involved.

SPECIAL INTEREST STREAM BANK EROSION

This statement is repetitious but vital.

During the past several years, members of our Association continue to express concern over river bank erosion. When the Upper Mississippi River Navigation System was constructed in the 1930's, it was our Association's view, and still is, that the then existing private levees became a part of the Navigation System, all tied closely to the economic welfare, human lives, recreation, and environment of the entire region. As the years have passed, the Mississippi River in its natural meandering action has tended to erode certain bank areas until some long existing levees are becoming endangered. "A stitch in time saves nine."

Our Association recognizes that bank erosion problems, if fully addressed, could become a major costly nationwide endeavor. However, there would appear justification for paying special attention to the Upper Mississippi River Navigation System.

One major justification being that many of the Upper Mississippi River Lock and Dams are anchored in levees on both sides of the river, which levees were originally constructed entirely with local funds by the Drainage Districts and other public and private parties.

There seems to be a Federal perception that since the Federal Government strengthened the existing levees from Hamburg Bay to Guttenburg, Iowa under the 1954 Flood Control Act and similar acts, and the Drainage Districts signed assurances that they would operate and maintain the levees in accordance with the dictates of the Secretary of the Army of the U.S. Government, the responsibility of shoreline protection, as it relates to the levees, rests on the shoulders of the Drainage Districts.

The Districts feel that assuming the responsibility of keeping the River in its channel is beyond the scope of the intent of the Federal Levee Improvement Assurance Agreements.

In light of the above, our Association solicited the aid of Congressman Richard Durbin of Illinois, who kindly with the co-sponsorship of 100 percent of the Congressmen from the affected tri-state area, namely Congressmen Michel and Evans of Illinois; Voikmer of Missouri; Leach and initially Tauke of Iowa, introduced H.R. 992 for Congressional consideration.

HR 992 did not fly. In order to expedite the problem, Congressman Durbin introduced a Resolution in the House directing the C.O.E. to make a Reconnaissance Survey at an estimated cost of $250,000.

A similar Resolution was introduced in the Senate by Senator Grassley in the amount of approximately $180,000.

On September 24, 1992, Congressman Robert A. Roe, Chairman of the Committee on Public Works and Transportation introduced Docket 2406.

Our Association now understands that Docket 2406 supersedes the two prior resolutions and that the Corps of Engineers now waits on funding for Docket 2406.

We are not privy to just how and what can be done to initiate the repair or rehabilitation work on endangered levees, but it is obviously not a new start. It constitutes repair to an existing structure constructed jointly by the Drainage Districts and the Corps of Engineers. Some of the endangered levees, or structures needing repair were originally constructed by the Federal Government as navigation projects.

Since the eroded levee sections have been pinpointed and are visually apparent, it would seem logical to Design and Construct if such authority and appropriation can in some manner be secured.

If not, we respectfully request that your Honorable Committee fund Document 2406 in the amount of $250,000 or to the full capability of the Corps of Engineers to perform.

Thank you for your consideration. It is a privilege to present this testimony.

STATEMENT OF JOHN A. ROBB, CONMISSIONER, HENDERSON COUNTY, IL, DRAINAGE DISTRICT, NO. 3

Mr. Chairman and distinguished members of the Committee, my name is John Robb. I am from Gladstone, Illinois. It is my pleasure to present to the Members of the Committee this request in behalf of District 3 of which I am a commissioner. I am also the Executive Vice-President for Illinois of the Upper Mississippi Flood Control Association. My remarks and request for appropriations will be confined to the needs of District 3 except for a general statement of the conditions and needs of the Upper Mississippi River System.

District 3 represents all of the land owners adjacent to and outside the left side main stem levee which forms and contains Pool 18. District 3 was formed in 1913 as a Drainage District under the authority of the State of Illinois Drainage Statutes of May 29, 1879. District 3 contains only 2500 acres with the major portion being highly productive agricultural land. We have never before presented a request for appropriations to the Congress.

The present condition of the left side levee for Pool 18 is a situation which demands immediate attention to prevent a disaster. Dam 18 is at River mile 410.4 as measured from the mouth of the Ohio River. The Corps of Engineers Rock Island District maintains the levee to mile 411.6 as a Federally owned and maintained extension of Dam 18 under the authority of the 9-foot navigation project of 1930. Although there is no change whatsoever in the elevation of Pool 18 or the adjacent land which is 3 feet lower than the normal pool level, the next 3 miles of levee is not considered necessary to contain the Waters of Pool 18 and the Navigation System. District 3 is expected to maintain this navigational pool levee for the final 3.5 miles on the Illinois side.

District 3 does not have the means to maintain this levee except for mowing grass, cutting the brush, and removing ground hogs. Therefore, for the past 20 years erosion, wave wash, and weathering has caused a deterioration that will sooner or later destroy the levee. The enclosed marked-up drawing shows the situation most clearly. Notice please, the left side levee is 3.5 feet lower than the right side levee directly across the River. The levee has a vertical face on the inside and outside as well as an area of wave wash, 1.5 miles long, were the top 4.5 feet is only 12 feet thick. A tributary the Henderson River is the south boundary of District 3 and flows into the Mississippi River just below Dam 18. Please, note the general land elevation 3 feet below normal pool level and you can readily see that without a levee OLE MAN RIVER will flank the dam. This is not a newly discovered phenomenon as controlling the course of the River has been the focus in the Lower Valley for years under the Mississippi River and Tributaries Act of 1928. The laws of physics have not been set aside in Henderson County either and without this levee Pool 18 would not exist and Dam 18 would become an embarrassment and a WHITE ELEPHANT. The United States Government must take responsibility for this integral part of the Navigational System.

The policy of the Corps of Engineers in the Upper Valley has been to consider levees to be for flood control only. But, without the levees the River would meander all over the Valley and maintaining a navigation channel would be impossible. The Dams on the Upper Mississippi present a different question. Where does the requirement for navigation stop and flood control begin? All the levees are necessary to confine the River and make it an asset and we could never be convinced otherwise. However, as this argument continues across the decades surely the Congress can recognize that the portion of the levee which is containing Pool 18 during normal water levels is surely essential to and an integral part of the Navigational System.

The upper Mississippi River has other problems which are progressing at an alarming rate. The Rivers' shoreline is being eaten away by erosion. There is very little shoreline revetments and levee rip rap. So the River is eating away the shore line and attacking the levees. There have been thousands of trees washed out and in many places where a barrier of trees protected the levees from wave wash and erosion they are completely gone. The Corps of Engineers has taken the position, we believe because of the lack of funding, that erosion must be stopped at the levee by the Drainage Districts. The Drainage Districts cannot put the River back into its cage. There is also the fact that the River is filling with silt which means all the levees, main stem and tributary must be raised. The magnitude of the project of containing the River is far beyond the Drainage Districts ability to finance or prosecute and must be carried out by our most expeditious professionals in these matters, Legislators and Engineers, not farmers. Some say that farmers receive such great benefit from the cheap transportation. Yes we do and we are grateful but there is only a very small ribbon of us along the River that are being asked to pay the freight for all the others. That is why we need governmental intervention.

The issue of seepage and extra pumping cost is another issue that must be addressed. In the 1930's the Dams were built and every one from Dam 16 through Dam 25 except Dam 19 are anchored to the levees. This means that for a considerable distance on each side of the river depending upon the lay of the land water is backed up above normal and seeps by hydraulic pressure into a drainage system and must be pumped back into the River. A portion of these costs were paid by the government until 1963 when the Corps of Engineers made an extensive study of the seepage and offered a lump sum settlement which was to pay the extra pumping cost forever. The impact of inflation and extra seepage due to silting in of the River causing longer periods of high water has revealed the settlement to be pitifully inadequate. In District 3 the settlement was $43,000. The cost of electricity alone in 1992 was $28,000 not including pump maintenance, facilities, operator, depreciation, insurance, and etc. Crop damage is also a continual problem. The total of crop damage has not been assessed at this time. District 3 is also requesting upon implementation of a satisfactory cost sharing program a re-evaluation be made every 10 years to consider any changed conditions. While the other Districts have a smaller portion of their districts effected, 70 percent of District 3 has seepage at normal water levels and results in the highest taxes on the River. District 3 is requesting the amount of $15,000 per year beginning in 1993 for extra pumping cost and a lump sum settlement of $200,000 for reimbursement of under payment during the past 30 years.

We all know that these are times when wise use of all of our assets is mandatory. The Corps of Engineers has done an outstanding job of balancing their budget and protecting this portion of the greatest transportation system in the world. But, they need proper funding to continue to protect this system. There are two ways to fund this project. The General Tax Fund which is certainly a legitimate means because world trade benefits everyone, or a consumer added tax upon every ton of freight shipped on the Upper Mississippi River. The Fee of 50 cents per ton would be assessed against the bill of lading by the shipper and forwarded to the administrating agency, i.e. the Corps of Engineers. The cost would then be passed along by the shipper to the users of coal, gasoline, sellers of grain, and etc. Typical cost increase would be less than one cent per gallon of gasoline and 1.4 cents per bushel on corn. There are 90 million tons shipped on the upper Mississippi each year which equals $45 million and would rebuild 30 miles of levees and shoreline per year including an allowance for restoring wildlife habitat which nature will not automatically replenish. In 10 years 300 miles of restoration, now that is getting the job done and everyone who is benefiting gets to help out.

We oppose any reorganization of the Corps of Engineers that would reduce the Rock Island Districts ability to maintain the Upper River System, there is to much work to be done. The restoration of the levees must be included in the Navigational System capacity improvements for which a study is currently underway for the 50 year planning horizon. The goal must be a navigational system that is as efficient and functional as possible without devastating thousands of acres of hard won, highly productive agriculture land in the process.

In closing I would like to thank the Members of the Committee for your understanding and consideration of our request and emphasize again the deterioration of the Upper Mississippi is continuing and inflation is going up. It will not get any cheaper.

Our total request for the fiscal year 1994 is $3,615,000. Including $3,400,000 for design and construction of restoration of the Pool 18 left side levee and $215,000 for seepage cost sharing. Our request is attached to this statement.

Henderson County Drainage District 3 fiscal year 1994 civil works budget—Mississippi River pool 18 navigation and flood control appropriation

Project	*Budget request*
Engineering and design	$80,000
Place 3 to 1 slope on outside of levee	1,795,000
Place 2 to 1 slope on inside of levee	281,000
Riprap 3 miles of levee	871,000
Preparation of land, restoration, and cleanup	372,000
Subtotal	3,400,000
Seepage cost sharing	215,000
Total	3,615,000

STATEMENT OF WILLIAM C. CHAPMAN, OKLAHOMA TESTIMONY FOR RED RIVER VALLEY ASSOCIATION

I am William C. Chapman, and I live near Madill, Oklahoma, on a farm/ranch in Marshall and Johnston Counties. My father came to Oklahoma in 1915 at age 27 and lived the rest of his 94 years in this area as a farmer and rancher. His parents purchased agricultural property in Red River County Texas, in 1926, and it has remained in my family since then and is now owned by me. My family has been very interested in the progress of the Red River Valley for three generations. I presently serve as Vice-President of the Oklahoma delegation of the Red River Valley Association and am speaking today in behalf of the entire Oklahoma delegation. Because we believe that any federal monies spent on the following projects are really investments in the future of not only the Red River Valley but of the surrounding states and will return several times the original investment in benefits that will eventually accrue to the federal government, we firmly endorse the following projects in the amounts quoted:

Navigation to Shreveport-Bossier City and the completion of Lock and Dams 4 and 5	$135,000,000
Bank stabilization and Red River Levees below Denison Dam	3,000,000
Red River Basin Chloride Control Project	14,000,000

We firmly believe that it is economically feasible as well as both logical and practical to bring navigation of the Red River to Denison Dam. In pursuit of that goal we feel that it is imperative and to the best interest of all concerned, including the U.S. Government, to finish the construction of Locks and Dams 4 and 5, thereby bringing navigation and commerce to the areas from Shreveport, Louisiana, downstream to the Mississippi River. As a great deal of federal monies have already been spent on this project, it only makes sense to finish this project and therefore recommend that the U.S. Government authorize the expenditure of $135,000,000 in fiscal year 1994.

We further believe that it is essential to protect the banks from cavings and erosion along the Red River below Denison Dam. The Federal Government constantly encourages its farmers to protect our lands against all forms of erosion, so it only makes sense to be consistent. It must do its share in preventing erosion along the nation's navigable streams. It also is imperative to protect its investment in navigation and flood control downstream. For these reasons we recommend the expenditure of $3,000,000 in fiscal year 1994 for Bank Stabilization and Red River Levees below Denison Dam.

The Final project that we wish you to consider concerns the very ability to fully utilize the surface water of the Red River during almost its entire journey across the four states of Texas, Oklahoma, Arkansas, and Louisiana. At the current time the chloride content of the Red River is such that it is not usable but in a few isolated cases for municipal, industrial and agricultural uses. This is due to the presence of eight major chloride sources located on the banks or within the streambed of the Red River in Oklahoma and Texas.

In 1957 after a comprehensive study by the U.S. Public Health Service, it was agreed by the U.S. Government and the States of Oklahoma and Texas that the individual states would clean up all man-made sources of chlorides within their boundaries that drained into the Red River and the U.S. Government would clean up the natural sources of chloride pollution. Oklahoma and Texas have kept their part of the bargain by removing some 99+96 of chloride pollution derived from man-made sources within their boundaries. The U.S. Government has begun to fulfill its part of the bargain having constructed Truscott Brine Lake, Bateman Pump Station, and chloride control projects at areas VII and X. In order to -adequately resolve the daily input of 94 train car load of chloride into Lake Texoma it is necessary and imperative for the U.S. Government to continue its work on Areas VI, VIII, and XIV. This would require Congress to appropriate $14,000,000 for fiscal year 1994 for the Tulsa District of the U.S. Corps of Engineers. As Area VI contributes 1/3 of all the natural chloride pollution and is the only source located within Oklahoma, we are particularly interested in this site being undertaken.

STATEMENT OF THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

The Louisiana Department of Transportation and Development, Public Works and Flood Control Directorate, is the agency designated to represent the State of Louisiana for the coordinated planning and development of water resources, including flood control, navigation, drainage, water conservation and irrigation projects; therefore, this statement is presented on behalf of the State of Louisiana. We are pleased to present the recommendations for fiscal year 1994 appropriations for Louisiana projects. The projects listed herein are separate from those in the statement by the Public Works and Flood Control Directorate on the Mississippi River and Tributaries Project.

In making the following recommendations regarding construction, surveys and some selected operation and maintenance items, the State of Louisiana, understands the Administration's need to reduce the Federal deficit, but would hope that Congress and the Administration will honor their prior commitments to infrastructure development and fund our requests. We feel that water resources projects are probably the most worthwhile and cost effective projects in the Federal budget, having to meet stringent economic justification criteria not required of other programs. We ask that this be taken into consideration in the final decision making process to appropriate the available funds.

Project	*Louisiana request*
Construction:	
Aloha-Rigolette area, Red River, LA	$2,967,000
Lake Pontchartrain and vicinity, hurricane protection	24,044,000
Larose to Golden Meadow	2,977,000
Mississippi River, gulf outlet	1,500,000
Mississippi River Ship Channel, Baton Rouge to gulf	6,161,000
New Orleans to Venice	1,233,000
Ouachita and Black Rivers	
Ouachita River levees, culvert replacement	3,800,000
Pearl River, Slidell, St. Tammany Parish, LA	1,000,000
Red River chloride control	6,000,000
Red River Waterway	135,000,000
Westwego to Harvey Canal, LA	8,410,000
Preconstruction engineering and design:	
Comite River, LA	800,000
East Baton Rouge Parish, LA	100,000
West Bank—East of Harvey Canal, LA	500,000
Authorized studies:	
Intracoastal WW locks, Louisiana (Algiers)	1,300,000
Amite River and tributaries	160,000
Bayou Lafourche and Lafourche jump waterway	20,000
Bossier Parish	
Grand and White Lakes, LA	
Gulf Intracoastal Waterway, LA and TX Section	
Jefferson-Orleans Parishes urban flood control, Louisiana	2,800,000

Project	Louisiana request
Lake Cataouatche Levee, LA	400,000
Louisiana coastal land loss and marsh creation	
Mississippi River gulf outlet, bank erosion	400,000
West bank of Mississippi River in the vicinity of New Orleans	
Operation and maintenance:	
Atchafalaya River, Bayou Chene, Boeuf and Black	5,587,000
Barataria Bay Waterway	135,000
Bayou Bodcau Reservoir	402,000
Bayou Lafourche and Lafourche-jump waterway	
Bayou Pierre	25,000
Bayou Segnette Waterway	
Bayou Teche	239,000
Bayou Teche and Vermilion River	
Caddo Lake	119,300
Calcasieu River and Pass	9,800,000
Freshwater Bayou	880,000
Gulf Intracoastal Waterway	13,007,000
Houma Navigation Canal	210,000
Lake Providence Harbor	285,000
Madison Parish Port	75,000
Mermentau River	690,000
Mississippi River:	
Baton Rouge to gulf	42,803,000
Gulf outlet	13,591,000
Outlets, Venice	2,348,000
Ouachita and Black Rivers	5,102,000
Pearl River, LA and MS	2,500,000
Red River Waterway—Mississippi River to Shreveport	6,629,000
Removal of aquatic growth	1,644,000
Wallace Lake	196,000
Waterway—Empire to the Gulf of Mexico, LA	

Ouachita River levees, culvert replacement (request, $3,800,000).—Congress authorized the culvert replacement in the Ouachita River Levees as a Federal responsibility in the 1991 Appropriations Act by appropriating $400,000 to start construction. There is a need to continue the culvert replacement program as authorized by Congress. The Corps was directed by Congress in 1992 to reprogram available funds into the project in order to proceed in an orderly, but expeditious manner. We ask that Congress continue this process by appropriating $3,800,000 to continue this much needed project.

Mississippi River ship channel, gulf to Baton Rouge, LA (request, $6,161,000).—We are very much interested in expediting the completion of the Mississippi River Ship Channel, Gulf to Baton Rouge, La., Project. We are still waiting for the Corps to approve the Phase 2 General Design Memorandum. We were hoping to sign an agreement and begin construction this year. This project is an example of infrastructure development that President Clinton has stated he supports to make our country competitive in the world market. And we urge your support in funding it.

The mitigation plan for saltwater intrusion for Phase 1 has finally been approved by the Corps. We are hopeful that construction will begin soon.

Comite River, LA (request, $800,000).—The Comite River, which drains an area of 348 square miles of agricultural and urban lands in southeast Louisiana, is a major tributary of the Amite River. The maximum flood of record in the Amite River Basin occurred in 1983 causing approximately $170,000,000 in damages, $48,000,000 in the Comite River Subbasin. This project would help to alleviate the flooding problems by diverting flows of the Comite River to the Mississippi River through a 12-mile diversion channel. This project was authorized for construction in the Water Resources Development Act of 1992. The State of Louisiana is anxious to get this project into the construction phase as soon as possible.

Amite River and tributaries and East Baton Rouge Parish, LA (request, $260,000).—These study areas are both in the Amite River basin which has experienced six major floods between 1973 and 1993. We urge Congress to continue the funding of this study to find a beneficial solution to the flooding in these areas.

Red River Waterway—Mississippi River to Shreveport, LA (request, $135,000,000).—The State of Louisiana wishes to express its desire to your committees for continued spending on the Red River Waterway Project at its accelerated construction schedule. The accelerated construction schedule mandated by your funding recommendations in previous years has saved the taxpayers of the United

States $300,000,000 on the construction of the Red River Waterway Project and we urge the continuation of this policy.

Aloha-Rigolette area, Red River, LA (request, $2,967,000).—It is anticipated that the Local Cooperative Agreement will be entered into by the Town of Colfax soon and construction can begin. We, therefore, urge your support for the funding of this much needed flood control project.

Red River basin chloride control project (request, $6,000,000).—With the Red River Waterway Project bringing navigation to Shreveport the water supply needs of the area will increase. Reducing the chloride content of the Red River, which is technically and economically feasible, would make the Red River usable for an economical water supply. We ask that funds continue to be provided for the construction of the Red River Chloride Control Project since this will enhance further economic development in the Red River Valley and make the Navigation Project prove even more economically feasible than previously anticipated.

Coastal Wetlands Planning, Protection and Restoration Act.—The passage of the Coastal Wetlands Planning, Protection and Restoration Act has been a positive force for Louisiana. This legislation is not only assisting the Nation and Louisiana in protecting and restoring precious wetlands of national significance but it has also freed up Corps' funds for other much needed flood control and navigation projects.

The State of Louisiana commends the Corps on its cooperation in coordinating the beneficial use of dredged material for coastal preservation.

Grand Isle flood protection.—In 1992 the Louisiana Legislature created a new levee district known as the "Grand Isle Independent Levee District." "Independent" indicating Grand Isle's unique characteristic of being the only human-inhabited barrier island-peninsula community in Louisiana, located in the Gulf of Mexico, 63 miles southwest of New Orleans, Louisiana. Because of its isolation, Grand Isle cannot be connected to any other levee alignment in the lower Mississippi River Delta area.

The importance of providing flood protection to the unique community is based on the benefit factor of having such facilities as the United States Coast Guard, Exxon, Conoco, and many other oil patch support services supplying many oil rigs in the Gulf of Mexico and vicinity. Grand Isle also hosts a unique French speaking culture and is a growing tourist resort area. Its importance is also based on its protective value as a buffer to the delicate ecosystem of the interior wetland marshes of Louisiana.

Until now, because of its status as virgin territory as far as a levee system is concerned, its northern exposure in the Caminada Bay area is extremely vulnerable to periodic flooding. The southern area, on the Gulf of Mexico side, has a hurricane surge protection or "sand dune" levee in place. The primary function of this new Levee District is to provide storm protection measures on the remaining portion of the island.

We respectfully request authorization and funding for the Corps of Engineers to perform a reconnaissance study to determine if a viable Federal flood control project can be justified for Grand Isle.

We wish to express our thanks to the Appropriations Sub-Committees on Energy and Water Development of the House and Senate for allowing us to present this brief on the needs of Louisiana. Without reservation, practically every single project in Louisiana which has been made possible through actions of these committees has shown a return in benefits many times in excess of that contemplated by the authorizing legislation. The projects which you fund affect the economy of not only Louisiana but the nation as a whole. The Public Works and Flood Control Directorate appreciates the accomplishments of the past and solicits your consideration of the appropriations requested for fiscal year 1994.

MISSISSIPPI RIVER AND TRIBUTARIES PROJECT

The Louisiana Department of Transportation and Development, Public Works and Flood Control Directorate, is the agency designated to represent the State of Louisiana in the planning and orderly development of its water resources. This statement is presented on behalf of the State of Louisiana and contains recommendations for fiscal year 1994 appropriations for Louisiana projects under the Mississippi River and Tributaries Project.

Louisiana contains the terminus of the Mississippi River, which has the fourth largest drainage basin in the world, exceeded only by the watersheds of the Amazon, Congo, and the Nile rivers. The river drains 41 percent, or 1¼ million square miles, of the United States and parts of two Canadian provinces. All of the runoff from major river basins such as the Missouri and Upper Mississippi, the Ohio including the Tennessee and others, and the Arkansas and White, flows into the Lower Mississippi, which empties into the Gulf of Mexico through Louisiana.

The jurisdiction of levee boards in Louisiana includes one-third of the State's total area. However, the importance of this one-third of the State can be seen by the fact that it contains nearly 75 percent of the State's population and about 97 percent of the State's disposable personal income. Traditionally, the levee district areas are water rich and have fallen heir to industrial development that ranks high in the nation. It has been estimated that about 60 percent of the State's agricultural products come from levee district areas. So you can see why Louisiana and its nineteen levee districts are so interested in seeing the completion of the Mississippi River and Tributaries Project.

In making the following recommendations regarding construction, surveys and some selected operation and maintenance items, the State of Louisiana, understands the Administration's need to reduce the Federal deficit, but would hope that Congress and the Administration will honor their prior commitments to infrastructure development and fund our requests.

Mississippi River and tributaries—summary of recommended appropriations

Louisiana projects	*Louisiana request*
Construction:	
Atchafalaya basin	$28,000,000
Floodway system	6,700,000
Channel improvements	63,300,000
Mississippi delta region project—Davis Pond	8,000,000
Mississippi and Louisiana estuarine areas	6,900,000
Mississippi River levees (Louisiana only)	17,000,000
Tensas basin, Arkansas and Louisiana—Red River backwater area	6,700,000
General investigations: Morganza to the gulf	563,000
Preconstruction, engineering and design: Louisiana State Penitentiary levee	300,000
Operation and maintenance:	
Atchafalaya basin	12,937,000
Baton Rouge Harbor—Devil Swamp, LA	230,000
Bayou Cocodrie and tributaries	115,000
Bonnet Carre Spillway	767,000
Channel improvement	67,669,000
Lower Red River—South bank levees	67,000
Mississippi delta region, Caernarvon, LA	188,000
Mississippi River levees	7,308,000
Old River Control Structure	3,901,000
Red River backwater area	2,545,000
Tensas basin, Boeuf and Tensas Rivers	2,573,000

Note: The projects listed above are only those in Louisiana and directly affecting the State. We realize that there are others outside of Louisiana that are vitally important to the Project and in these areas, we endorse the recommendations of the Lower Mississippi Valley Flood Control Association.

Atchafalaya basin (request, $28,000,000).—This project is a Main Stem component of the flood control plan for the Mississippi River and Tributaries Project. The Mississippi River can safely carry only one-half of the project flood, or 1,500,000 cubic feet per second, below Old River; the other 1,500,000 cubic feet per second must be discharged through the Atchafalaya Basin. The levees which must confine this flow to the basin are now deficient because they have settled below original design grade due to consolidation of the underlying soils, and the design has been revised upward. This places the lives and welfare of approximately 650,000 people and their property and improvements in 13 parishes in the immediate vicinity of the Atchafalaya Floodway in jeopardy each flood year. The tax assessment records indicate the value of potential flood losses to be approximately $8 billion, not including public improvements. Over the past half century, we have supported the Mississippi River and Tributaries Project and have agreed that construction of flood protection works should start upstream and progress downstream. As a result, the Mississippi River and Tributaries Project is now more than 90% complete in sites upstream from Louisiana while the levees in the Atchafalaya Basin can contain only approximately 85% of the project flood. Work on this project has been underway since 1928 and isn't scheduled for completion until the year 2010.

Channel improvements (request, $63,300,000).—Channel improvements and stabilization provide protection of levees and the many improvements behind them, as well as preventing unsatisfactory alignment where the river's bank is unstable. This project is also a Main Stem component of the flood control improvement program for the Mississippi River and the benefits its are the same as for the other main stem components. The Mississippi River and Tributaries Project above Louisiana is about 90 percent complete but to a much lesser extent within Louisiana. Because of the improvements upstream, increased flows are a major problem in Louisiana where the project is lagging. The funds we are requesting are for use in Louisiana and will provide for the dredging and revetment work necessary to accommodate these increased flows. Additional funds will be required for work upstream of Louisiana.

Mississippi River levees (request, $17,000,000).—Construction of mainline Mississippi River Levees in Louisiana also lags behind the construction in the upper valley. The same reasons that apply to our request for funds for channel improvements on the Mississippi River and improvements in the Atchafalaya Basin, apply equally well to our request for funds for the Mississippi River levees. The $17 million requested are for use in Louisiana, additional funds will be required by upstream states.

Mississippi delta region project, Davis Pond (request, $8,000,000).—Davis Pond Freshwater Diversion Project is necessary to aid in the fight against coastal erosion and land loss. The State of Louisiana's commitment to this project is demonstrated by our agreement to provide 25 percent of the cost of construction, operation and maintenance of the Davis Pond structure despite Congressional project authorization at 100 percent Federal cost as mitigation for the Mississippi River and Tributaries Project.

Louisiana State Penitentiary levee (request, $300,000).—The Louisiana State Penitentiary Levee was included into the Federal system of the Mississippi River and Tributaries Project by Congress in 1986 and was re-authorized for an additional five years in the Water Resources Development Act of 1990. The 1990 Act also revised the definition of a single beneficiary eliminating the Administration's reason for its reluctance to proceed with this project. In 1990 Congress appropriated $300,000 for this project, but the Administration did not allocate these funds. We are hopeful that the new Clinton Administration will view this project in a more favorable light. We urge your support once again in funding this project.

Local contributions for flood control improvements.—Historically, Louisiana has always done its part in cooperation with the Federal agencies concerned with flood control. The Louisiana State Board of Engineers, the forerunner of the Department of Transportation and Development, Public Works and Flood Control Directorate, was created in 1879, the same year as the Mississippi River Commission, to coordinate the planning and construction of the required flood control facilities to protect the State. Since that time, local expenditures for flood control have exceeded $730,000,000. This amount adjusted to 1979 dollars represents expenditures in excess of $5.3 billion. Nearly one-half of the potential flooded area of the Lower Mississippi River Valley lies in Louisiana. Local expenditures for flood control have increased with the growth of the valley. This record not only meets, but exceeds any National Water Policy local participation requirements ever put into practice.

The State of Louisiana, Department of Transportation and Development, Public Works and Flood Control Directorate, in particular, wishes to commend the Appropriations Sub-Committees on Energy and Water Development and express our appreciation for the foresight and understanding exhibited for water resources projects which are vital to the national interest. We solicit your further consideration of the recommendations presented herein.

STATEMENT OF J. FRED SCHWARTZ, PRESIDENT, SNY ISLAND LEVEE DRAINAGE DISTRICT

Mr. Chairman and distinguished members of the committee, I am writing to you on behalf of the Sny Island Levee Drainage District, located twelve miles southeast of Quincy, Illinois and 70 miles north of St. Louis, Mo., between river mile 267 and 316. The District protects approximately 125,000 acres of fertile, river bottom farm ground that substantially contributes to our national wealth by producing an abundance of farm crops and related products.

The Sny District maintains 54 miles of main stem Mississippi River levee banks, which are currently being drastically eroded by the Mississippi River wave wash, silting, and spreading to a dangerously inadequate capacity, particularly in areas where the Mississippi River dikes are located. 15 miles of the District's main stem Mississippi River levee are in critical condition, and 10 miles serious condition. That's 46 percent of the District's main stem river levee. In the 15 miles of critical levee, the wave wash has gone beyond the toe of the levee and is eroding the Sny's Mississippi River levee itself. The 10 miles of Sny Mississippi River levee that are in serious condition have a small amount of toe remaining that is quickly deteriorating, and continuously being washed away by the Mississippi River wave wash and current.

Another contributing factor to the Sny main stem levee erosion is the dammed Mississippi River levee pools No. 21, No. 22, and No. 24 being maintained at a nine foot navigational channel level. The dammed Mississippi River pools cause seepage in the Sny's District and thus require extra pumping by the Sny's eight pumps located at three different sites.

The main stem Mississippi River levee was improved in the early 1960's to a 50-year flood frequency level; but, to adequately protect the land and property in the Sny District, the Commissioners feel that the main stem levees should be raised and strengthened to 200–500 year flood frequency levees, with rip-rap along the critical and serious levee bank areas. One of the main reasons that the District's levee height is no longer adequate is due to continual siltation in the River which decreases its capacity. During times of high flows and run-off the Sny's current combined pumping capacity of 1,136,000 gallons per minute would not be adequate to prevent flooding. If the Sny were to experience high water levels along its Mississippi River levees the critical areas of the levee would not hold, and would allow a levee breach. If a breach of levee occurred, not only would many acres of farmland, various businesses, small towns and homes be endangered by flood waters, but the new 4-lane highway with trumpet and diamond interchanges and the Mississippi river bridge to Missouri (to be constructed in the near future, at an estimated cost of $12 million), would also be threatened. It is inconceivable that the State and Federal government would spend millions of dollars on a 4-lane transportation system which transverses the District's flood plain, and then fail to help the local District protect it from flooding. Major damage to all of these structures could occur as early as this spring and "time is of the essence" in strengthening and improving the levees to prevent a breach.

In order to achieve these adequate levels of flood control protection, the Sny Island Levee Drainage District will require Federal financial assistance for the U. S. Arms Corps of Engineers to raise and strengthen the main stem Mississippi River levee.

STATEMENT OF DAVID A. SPRYNCZYNATYK, PRESIDENT, MISSOURI RIVER BASIN ASSOCIATION

Summary of Requests:

1. MISSOURI RIVER FISH AND WILDLIFE MITIGATION PROGRAM: Requesting an appropriation of $12 million for the program in Fiscal Year 1994 plus the unexpended funds appropriated for the program in Fiscal Year 1993. This program was authorized by Congress in the Water Resources Development Act of 1986.

2. MISSOURI RIVER BANK STABILIZATION: Requesting $1.5 million for the program in Fiscal Year 1994 plus the unexpended funds appropriated for the program in Fiscal Year 1992 and Fiscal Year 1993. This program was authorized under Section 33 of the Water Resources Development Act of 1988.

3. BIODIVERSITY TRUST IN SOUTH DAKOTA: Requesting $1.5 million be appropriated to the Trust in Fiscal Year 1994. Establishment of the South Dakota Biological Diversity Trust was authorized by Congress in Title 32 of the Reclamation Projects and Adjustment Act of 1992 (P.L. 101-575).

Mr. Chairman and members of the Subcommittee, I am David A. Sprynczynatyk, North Dakota State Engineer and President of the Missouri River Basin Association (MRBA). I present this testimony on behalf of the Missouri River Basin Association. My purpose is to urge your support of several projects that those of us in charge of managing the water resources in the eight Missouri River Basin states of Montana, Wyoming, North Dakota, South Dakota, Iowa, Kansas, Nebraska, and Missouri have agreed will be of enormous benefit to the entire basin.

MRBA - BACKGROUND:

The Missouri Basin States Association was formed by the Governors of the Missouri Basin states in 1981 to coordinate River planning activities after then President Reagan disbanded the old Missouri River Basin Commission. We are a coalition of Governor-appointed water policy representatives from eight Missouri Basin states. In the fall of 1990, we added another voting position on our Board for a representative of the Basin's Indian tribes. Also included on our Board are non-voting, advisory representatives of the various federal agencies with jurisdiction in the Missouri Basin, including the Corps of Engineers, the Bureau of Reclamation, the Bureau of Indian Affairs, the Environmental Protection Agency, the U.S. Geologic Survey, Western Area Power Administration, the Department of Transportation, and the U.S. Fish and Wildlife Service.

Despite six consecutive years of drought in the Missouri River Basin and the tensions resulting from our dwindling water supplies, the Missouri River Basin Association has built an unparalleled record of success at finding common ground among the Basin's states, tribes and federal agencies.

Recently, we influenced major changes in the way the Corps of Engineers conducts its planning activities for the River. Instead of developing its recommendations internally, the Corps now awaits recommendations from the states and tribes in the Missouri Basin through our Association before the Corps completes their Annual Operating Plans. For the past two years, the Corps has adopted our recommendations virtually point-for-point. We replaced the divisiveness of the Corps' planning process with consensus among the basin's states and tribes.

The Corps' Annual Operating Plan for the Missouri River is developed under the broad planning framework of the Missouri River Main Stem Master Operating Manual (Master Manual). The Master Manual is currently undergoing an extensive re-evaluation, the results of which could have profound impacts on the economic and environmental resources of the Basin. From the beginning, technical committees appointed by the Directors of the Missouri River Basin Association have help shaped the research, the direction, the data collection and the modeling used in the review process.

PROGRAMS:

In addition to our work in River planning activities, the Directors of the Association seek opportunities to support programs that offer major benefits to the basin. We have forged a consensus-based, visionary program to protect and enhance the Basin's environmental resources. We urge the Members of the Energy and Water Development Subcommittee to support the following programs and appropriations. In doing so, you will encourage our efforts to promote cooperation among the basin's many competing interests, and you will help us protect and enhance the Basin's resources.

MISSOURI RIVER FISH AND WILDLIFE MITIGATION PROGRAM:

The Missouri River Fish and Wildlife Program was authorized by Congress in the Water Resources Development Act of 1986. The program's purpose is to mitigate fish and wildlife losses resulting from construction and operation of the Missouri River Bank Stabilization and Navigation Project which channelized the Missouri River from Sioux City, Iowa to near St. Louis, Missouri. Last year, Congress appropriated $7.6 million for the Mitigation Program. This year, we are requesting that the Senate Appropriations Subcommittee on Energy and Water Development approve an appropriation of $12 million for the program in Fiscal Year 1994 plus the unexpended funds appropriated for the program in Fiscal Year 1993. This level of funding will enable the Corps of Engineers to achieve considerable progress in enhancing fish and wildlife habitat in the basin.

MISSOURI RIVER BANK STABILIZATION:
This project was authorized under Section 33 of the Water Resources Development Act of 1988. For Fiscal Year 1992 and Fiscal Year 1993, Congress appropriated $1.5 million for the Corps of Engineers to repair existing projects and to continue stabilizing unprotected banks of the Missouri River in the free-flowing river reaches of the River. This year, we are again requesting an appropriation of $1.5 million for the program in Fiscal Year 1994 plus the unexpended funds appropriated for the program in Fiscal Year 1992 and Fiscal Year 1993.

BIODIVERSITY TRUST IN SOUTH DAKOTA:
Last year, Congress authorized the establishment of a Biodiversity Trust in the state of South Dakota in Title 32 of the Reclamation Projects and Adjustment Act of 1992 (P.L. 101-575). The purpose of the Trust is to protect or restore the best examples of South Dakota's biological diversity, its rare species, exemplary examples of the state's plant and animal communities and large scale natural ecosystems. The Trust is authorized to receive up to $12 million in federal contributions. The Directors of the Missouri River Basin Association recognize that protection and enhancement of South Dakota's natural ecosystems will benefit the waterfowl and other wildlife populations throughout the Basin. Therefore, we urge the members of the Senate Appropriations Subcommittee on Energy and Water Development to approve an appropriation of funds for the South Dakota Biological Diversity Trust. We recommend that $1.5 million be appropriated for the Trust in Fiscal Year 1994.

Mr. Chairman, on behalf of the states and tribes in the Missouri River Basin, I thank you for the opportunity to present our testimony. We appreciate your consideration. If you have any questions concerning this testimony, please contact me at (701) 224-4940, or Richard Opper, our Executive Director, at (406) 542-6272.

STATEMENT OF LARRY D. DOWDY, EXECUTIVE VICE PRESIDENT, LITTLE RIVER DRAINAGE DISTRICT

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

MY NAME IS LARRY D. DOWDY. I LIVE IN CAPE GIRARDEAU, MISSOURI AND SERVE AS EXECUTIVE VICE PRESIDENT FOR THE LITTLE RIVER DRAINAGE DISTRICT WHICH SERVES A LARGE PORTION OF LAND IN SOUTHEAST MISSOURI. OUR DISTRICT IS INVOLVED IN THE MOVEMENT OF APPROXIMATELY TWO MILLION ACRES OF WATER EACH YEAR. MY TESTIMONY WILL RELATE SPECIFICALLY TO THE F. Y. 1994 APPROPRIATION FOR THE ST. FRANCIS BASIN PROJECT WHICH IS A PART OF THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT.

MY STATEMENT IS ON BEHALF OF OUR DISTRICT AS WELL AS OTHER LEVEE AND DRAINAGE DISTRICTS WITHIN THE ST. FRANCIS BASIN PROJECT, BEING BOTH IN SOUTHEAST MISSOURI AND NORTHEAST ARKANSAS. TO MY KNOWLEDGE, ALL OF THE DRAINAGE AND LEVEE DISTRICTS THAT WE ARE REPRESENTING TODAY ARE LOCALLY TAX FUNDED AND OPERATED AND ARE DEPENDENT UPON EACH OTHER FOR THEIR OUTLET OF WATERS THROUGH THE ST. FRANCIS RIVER AND ULTIMATELY DEPOSITING THAT WATER IN THE MISSISSIPPI RIVER NEAR HELENA, ARKANSAS.

WE SUPPORT THE AMOUNTS IN THE PRESIDENT'S BUDGET FOR THE CONTINUED CONSTRUCTION OF THE DIFFERENT ITEMS IN THE ST. FRANCIS BASIN PROJECT. IT IS OUR BELIEVE THAT THESE AMOUNTS ARE ADEQUATE AND WE ASK FOR YOUR SUPPORT FOR THESE ITEMS.

FURTHER, AND VERY IMPORTANT TO OUR DISTRICT, IS THE MONIES THAT ARE WITHIN THE BUDGET FOR PROJECTS THAT THE FEDERAL GOVERNMENT HAS CONSTRUCTED AND UPON WHICH THE RESPONSIBILITY OF MAINTENANCE IS THAT OF THE FEDERAL GOVERNMENT. THE AMOUNTS IN THE BUDGET SHOULD BE WITHIN THE CAPABILITIES OF THE CORPS OF ENGINEERS AND WILL BE WISE INVESTMENTS WHEN SPENT IN SOUTHEAST MISSOURI AND NORTHEAST ARKANSAS.

THE OVERALL ASKING FOR THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT IS $360,000,000 WHICH IS THE AMOUNT THAT WE ASK YOU TO SUPPORT AND THAT THESE AMOUNTS CAN AND SHOULD BE ADEQUATE TO CONTINUE THIS MUCH NEEDED PROJECT.

WE ALSO MUST POINT OUT TO YOU THAT THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT WAS A CONGRESSIONAL SET PROJECT THAT WAS ESTABLISHED BY LAW TO SOLVE A NATIONAL PROBLEM AS THE MISSISSIPPI RIVER CARRIES OVER FORTY PERCENT (40%) OF THE WATER THAT FLOWS THROUGH OUR NATION AND SOME PARTS OF CANADA. WE WISH THAT THIS OBJECTIVE THAT WAS INITIATED SOME TIME AGO BY MEMBERS OF CONGRESS, COULD CONTINUE TO BE AS IT WAS INTENDED AND NOT AS WE SEEM TO BE DRIFTING FURTHER AND FURTHER FROM THE PROJECT BEING A NATIONAL PROBLEM, BUT ONE THAT IS OF BENEFIT ONLY TO THOSE WHO CAN AFFORD IT, AND THOSE WHO CAN'T CONTINUE TO SUFFER FROM THEIR NOT BEING ABLE TO PROVIDE THE COST-SHARING THAT WAS IMPLEMENTED JUST A FEW YEARS AGO. UNLESS SOME RELIEF OR ALTERNATIVES ARE MADE IN THE COST-SHARING ASPECTS OF SUCH PROJECTS AS THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT, WHICH WILL BE A GREAT ASSET TO OUR NATION, WILL NEVER REACH FRUITION. WE NEED YOU TO HEAR AND INCORPORATE OUR DESIRES. AS A MATTER OF INFORMATION FOR YOU, PRESIDENT CLINTON, WHO WAS THEN GOVERNOR OF THE STATE OF ARKANSAS, RECOMMENDED IN THE FINAL REPORT OF THE LOWER MISSISSIPPI DELTA ECONOMICS COUNCIL, ON WHICH HE SERVED AS CHAIRMAN, THAT THERE SHOULD BE A TEN YEAR MORATORIUM ON COST SHARING AND ON FLOOD CONTROL PROJECTS THROUGHOUT THE ENTIRE MISSISSIPPI VALLEY. WE WOULD HOPE THAT YOU WILL GIVE SOME CONSIDERATION TO THAT STATEMENT AND STRIVE TO MAKE THAT BECOME A REALITY.

AS AN EXAMPLE OF A PROJECT THAT IS WITHIN OUR IMMEDIATE AREA WHICH WILL, FOR ALL INTENTS AND PURPOSES, GO UNDONE BECAUSE OF THE PRESENT COST-SHARING CRITERIA, I WILL GIVE YOU SOME INFORMATION PERTAINING TO IT. BECAUSE NO ONE IS ABLE TO PROVIDE THE COST-SHARING AMOUNTS WHICH WERE A MINIMUM OF TWENTY-FIVE PERCENT (25%), THE INCONVENIENCES AND PROBLEMS WILL CONTINUE AS THEY HAVE FOR MANY YEARS. A STUDY HAD BEEN REQUESTED TO EXTEND WORK ON AN OLD FORK OF CASTOR RIVER WHICH WAS NOTHING MORE THAN AN OLD SLOUGH WHICH DID NOT HAVE CONTINUAL FLOWS BUT DID SERVE AS AN OUTLET FOR LOCAL WATERS DURING HEAVY RAINFALLS. FOR

YEARS MANY ROADS HAVE BEEN INUNDATED, HOMES FLOODED, WELLS POLLUTED, AND OTHER SUCH INCONVENIENCES RESULT BECAUSE NO ONE WILL, OR CAN, DO THE NECESSARY WORK THAT IS REQUIRED. YET THOSE WHO ARE SUFFERING FROM THESE INCONVENIENCES OF FLOOD WATERS. ARE DOING SO BECAUSE THE WATERS THAT ARE COMING INTO THEIR HOUSES AND ON TO THEIR LANDS IS FROM WATERS THAT HAVE ORIGINATED SEVERAL MILES AWAY. AT PRESENT THE GROUND RULES THAT ARE BEING USED BY THE U. S. ARMY CORPS OF ENGINEERS, NO RELIEF IN THE NEAR FUTURE IS IN SIGHT.

WE RECOGNIZE THAT THERE IS A NEED TO REDUCE THE FEDERAL BUDGET AND AS WE HAVE DONE IN THE LAST SEVERAL YEARS, WE ARE NOT ASKING FOR AN INCREASE IN THE ABOVE MENTIONED PROJECTS, BUT ARE ONLY ASKING FOR THOSE AMOUNTS THAT ARE WITHIN THE PROPOSED 1994 BUDGET. WE RESPECTFULLY REQUEST THAT YOU GIVE DUE CONSIDERATION TO THESE REQUESTS AND HOPE IN TIME WE CAN CHANGE SOME OF THE PROBLEMS THAT ARE DELAYING AND PLACING IN JEOPARDY OTHER GOOD PROJECTS THROUGHOUT THE ENTIRE VALLEY AND SPECIFICALLY WITHIN OUR REGION.

ANOTHER ISSUE THAT WE AGAIN MENTION TO YOU, IS THE WETLANDS ISSUE, WHICH IS BEING IMPLEMENTED BY VARIOUS FEDERAL AGENCIES. IN THIS CURRENT AGREEMENT OR ACT WE SEE A TOTAL IGNORING OF THE NEEDS OF THE RURAL AND FARMING AREAS AND WE ALSO FEEL THAT THE PRESENT IMPLEMENTATION OF THAT ACT IS NOT FAIRLY ADMINISTERING THE CONGRESSIONAL INTENT. IT APPEARS TO US THAT THE INTENT OF THE EXECUTIVE DEPARTMENT IS TO REDUCE OR LITERALLY SHUT DOWN THE PRODUCTION OF AGRICULTURE, AND IF THIS IS SO, THEN THEIR EFFORT IS WORKING QUITE WELL. IF THERE IS ANYTHING THAT THIS COMMITTEE CAN DO TO CHANGE THE TENOR OF THAT ACT OR THE INTERPRETATION OF IT, THEN WE WOULD GREATLY APPRECIATE YOUR SUPPORT AND EFFORTS IN THAT WAY. THIS ACT EXPLICITLY VIOLATES THE CONSTITUTIONAL RIGHTS OF PRIVATE OWNERSHIP. IT IN A VERY REAL WAY TAKES THE USE OF PRIVATE LANDS AWAY FROM THE OWNER WITHOUT COMPENSATION. THIS NEEDS TO BE CHANGED. IF THE ADVOCATES OF THIS EFFORT FEEL SO STRONGLY ABOUT THEIR MOVEMENT THEN LET THEM PURCHASE FROM WILLING SELLERS THOSE LANDS AT A MARKET VALUE. IF NOT, THEN LET THE PRIVATE LANDOWNER CONTINUE TO USE, DEVELOP AND UTILIZE HIS RESOURCES, HIS LAND, TO HIS BENEFIT AND GENERAL WELFARE UNLESS HIS EFFORTS POSE THREAT TO THE LIFE OF OTHERS. LET'S RETURN TO THE INTENT OF OUR DEMOCRATIC CONSTITUTION AND CEASE BECOMING AN ANARCHY.

SUBCOMMITTEE RECESS

Senator JOHNSTON. The subcommittee will stand in recess until 2 p.m.

[Whereupon, at 12 noon, Monday, March 29, the subcommittee was recessed, to reconvene at 2 p.m., the same day.]

(AFTERNOON SESSION, 2 P.M., MONDAY, MARCH 29, 1993)

NONDEPARTMENTAL WITNESSES

OPENING STATEMENT

Senator JOHNSTON. The subcommittee will come to order. We are singularly honored this afternoon to have the presence of my distinguished friend, the distinguished senior Senator from Alabama, whose bidding we do—anything he asks us within reason he gets.

And so, Senator Heflin, we are glad to have you. And we would like for you to give us your request. I am sure we will follow them to the letter; at least we will try to.

STATEMENT OF HON. HOWELL HEFLIN, U.S. SENATOR FROM ALABAMA

Senator HEFLIN. Well, you have done mighty well by us in the past, but we want you to do a little better in the future. [Laughter.]

Well, I will make mine short, because you have many witnesses to hear. And I have appeared here many times.

While Alabama waterway projects are very important to the state, waterways and water are the best natural resource that any State can have. We have a lot of specifics.

And I am going to ask that my testimony, which is written, be made part of the record.

COOSA-ALABAMA RIVER NAVIGATION SYSTEM

I do want to mention some of the individual waterways and some aspects of them. The Coosa-Alabama Waterway continues to need timely and complete dredging of the channels in order that it might stay open and be navigable the entire year long.

And there is a great need for an investment in the fourth lock and dam south of Clairborne, which would provide additional stimulus to private investment by allowing the year-around navigation of the Alabama River. It is apparent that the only lasting solution to the seasonal low-water problem is the construction of a new lock and dam.

We, of course, feel it is important to continue the funding of the study by the Corps of Engineers of the Alabama, Georgia, and Florida problems concerning the water supply.

WARRIOR-TOMBIGBEE RIVERS NAVIGATION SYSTEM

The Warrior-Tombigbee continues to be in need of work, particularly in the operation and maintenance requests. There are other requests that I am going to mention in this.

NORTHPORT, AL, LOCAL PROTECTION PROJECT

And the Warrior at Northport, there is a flood control levee that is vitally needed. This is an ongoing project that needs continued support from Congress.

The Apalachicola-Chattahoochee-Flint Waterway continues to prove itself. However, they have requests for funding in the George W. Andrews Lock, Dam and Lake, the Jim Woodruff Lock, Dam, and Lake Seminole, the Buford Lock, Dam and Lake Sidney Lanier, and the Walter F. George Lock, Dam, and Lake, West Point dam and lake, and the Apalachicola-Chattahoochee-Flint, Alabama, Coosa, and Tallapoosa River Basins study, which is all important and for which the Corps of Engineers is involved at the present time.

We thank you for your support in the past. And we ask that you will continue to be kind to us.

Senator JOHNSTON. Thank you very much, Senator Heflin. It is always a pleasure to have you here. And we will continue to do well by Alabama.

[The statement follows:]

STATEMENT OF SENATOR HEFLIN

Mr. Chairman, as you and the other members of this committee know, I have a deep and abiding interest in the development of the waterway resources in Alabama and our nation. I appreciate the opportunity to appear before you today and join with spokesmen from the Alabama River Development Associations in support of funds for the continued and orderly development of water resources in Alabama.

Because of our crowded agenda, my remarks will be brief. It will be more beneficial to this committee to receive the views and recommendations of those here today from the Alabama Waterway Development Authorities who have traveled here to present their cases to you on behalf of their respective waterway systems. This group is dedicated to the principle that the citizens of Alabama and the nation will realize and benefit from the continuing developmental potential of Alabama's rivers and other water resources. I warmly commend their testimonies to you.

Mr. Chairman, water is our state's richest and most abundant natural resource. In fact, Alabama is blessed with more miles of navigable waterways than any other state in the nation.

As this committee is well aware, inland waterways are a vital component of America's transportation infrastructure. The availability of the efficient and reliable barge service is extremely important to the viability of key sectors of the U.S. economy and certainly the economy of Alabama. The economic livelihood of certain geographical areas may well depend on transportation efficiencies which only waterways can offer in delivery of raw and vital materials, access to distant markets, economies of scale and/or water compelled freight rates. For all of these reasons and more, there is clearly a broad public interest in the inland waterway systems which justifies the request for continued federal participation.

All of the projects for which we are seeking funds will serve several purposes at once; namely, better economic opportunities, more recreational opportunities, more jobs and a better standard of living. Indeed, the overall quality of life in our state and elsewhere will be enhanced if we fund these projects and bring them to complete fruition.

COOSA-ALABAMA WATERWAY

Mr. Chairman, thank you for this opportunity to again appear before this committee on behalf of funds for the Coosa-Alabama Waterway and Mobile Harbor. Because of your crowded agenda, my remarks will be brief.

During my time, I would like to emphasize some of the main concerns of the Coosa-Alabama River Association.

In the light of our growing national debt and the streamlining of industries to become more competitive, it should be noted that waterways provide efficient transportation productivity. A reduction in a manufacturer's transportation costs leads to lower inflation rates and a stimulus to national productivity, which thereby reduces the federal deficit through increased revenues. Also, lower freight rates are in the national interest as manufacturers and farmers strive to compete with international interests both domestically and abroad, and thus improve our balance of payments.

The success of extensive commitments to stimulate private investment of navigable waterways is contingent upon the continued federal maintenance and operations of the waterways. Therefore, it is important that funding is available for continued timely and complete dredging of the Alabama River Channel along with maintenance and operation of the Alabama River waterway from Mobile to Montgomery, including Mobile Harbor.

Investment in a fourth dam south of Clairborne would provide additional stimulus to private investment by allowing year-round navigation of the Alabama River. It is apparent that the only lasting solution to the seasonal low water problem is the construction of a new lock and dam. I urge the committee to initiate the project.

It is also important to continue to fund the remaining term of the study by the Corps of Engineers and Alabama/Georgia/Florida concerning the two-basin water supply. An equitable resolution of the issues is vital to the long term growth and economic stability of the tri-state region.

Studies of completed waterways, such as the Arkansas River and the Gulf Intracoastal Waterway, show that the returns from federal funding fully justify the investment. Also, a return of the Waterways Trust Fund is desired as an investment by waterway users to assist in the extension of waterway development.

Mr. Chairman, waterways provide a competitive alternative for shippers. Not only that, waterways provide efficient transportation productivity which lowers inflation and tends to ease upward pressure on the deficit. That is why we must support and improve our waterways as an important investment in America.

I am most grateful to this committee for its interest in the full development of the water resources in Alabama. In Alabama, there have been billions of dollars in non-federal, water-related developments over the last ten years. This is evidence that the federal funds allocated by this committee are surely true investments. With your continued help, the developments will return rich dividends to our citizens and will confirm the faith and high expectations of this committee.

WARRIOR-TOMBIGBEE WATERWAY

Mr. Chairman, I would like to thank you for this opportunity to again appear before the committee on behalf of funds for the Warrior-Tombigbee Waterway.

Without the knowledge of the current Administration's priorities in waterway development and operations, the Warrior-Tombigbee Development Association has prepared an Operations and Maintenance appropriations request of $19 million.

Mr. Chairman, the Operation and Maintenance request is based upon requirements from previous years, $18.1 million in fiscal year 1992 and $18 million in fiscal year 1993, plus anticipated increases in funding to continue on-going projects on reasonable schedules. The requested funding is necessary to cover minimum day-today operations and to continue channel improvement projects in the approaches to the Tombigbee River bridges at Jackson and Naheola. Construction and installation phases of the bank stabilization program is ready to begin on the Naheola project during fiscal year 1994. An increase in the Operations and Maintenance account is needed to perform unexpected surveys required under the Endangered Species Act. Finally, the funding is needed to continue the purchasing of upland disposal sites for dredged materials. Negotiations on several proposed sites are being concluded and funding is required to complete the purchases.

Mr. Chairman, waterway transportation consumes less fuel per ton-mile of cargo hauled than airlines, railroads or trucks. Therefore maintaining a viable waterway transportation infrastructure assists in reducing this nations dependence on foreign fossil fuels. I believe it is essential that the Maintenance and Operations full funding for the Warrior-Tombigbee waterway is approved to insure navigable waterways are available for our domestic markets to remain competitive with international interest.

I fully support the projects of the Warrior-Tombigbee Development Association and I would to urge the committee to approve the requested funding set forth today.

APALACHICOLA-CHATTAHOOCHEE-FLINT WATERWAY

Mr. Chairman, today I would like to respectfully request that you approve funds for the Operation and Maintenance of four multipurpose dams on the Apalachicola-Chattahoochee-Flint (ACF) Waterway system. Also, I hope you will continue to support the comprehensive river basin study. The funding required for these projects are:

George W. Andrews, Dam and Lake	$4,250,000
Jim Woodruff Lock, Dam and Lake Seminole	4,750,000
Buford Lock, Dam and Lake Sidney Lanier	6,500,000
Walter F. George Lock, Dam and Lake	6,000,000
West Point Dam and Lake	5,500,000
Apalachicola, Chattahoochee, Flint and Alabama, Coosa, Tallapoosa River basins study	3,000,000

It is also vital we continue the Operation and Maintenance funding for the Apalachicola-Chattahoochee-Flint Inland Waterway river system. Without this funding navigation on the inland waterway system would be severely restricted.

As you will hear in the testimony given today by Ben Bowden, President of the Tri Rivers Waterway Development Association, there are six public ports along the ACF Waterway representing an investment of $15 million. Moreover, there are millions of additional dollars invested in private facilities and industrial operations. To ensure full use of this private investment I support the requested Maintenance and Operation funding which will enable continued navigation on the ACF waterways.

I hope you will give every consideration possible to the requests today of those who are here to represent the Tri-Rivers System.

Thank you, Mr. Chairman.

NATIONAL FERTILIZER AND ENVIRONMENTAL RESEARCH CENTER

Mr. Chairman, thank you for this opportunity to appear before your committee on behalf of TVA's National Fertilizer and Environmental Research Center, or NFERC for short.

This Research Center has created fertilizer and agricultural innovations in the past five decades that have fueled legendary gains in food and fiber production—benefitting every U.S. citizen and millions more around the world. NFERC has been at the leading edge in keeping U.S. agriculture sustainable, competitive, and internationally prominent.

This nationally significant laboratory got its start during the creation of TVA when the government nitrate facilities in Alabama were given to TVA. Those facilities were originally built to provide munitions during World War I, and TVA was successful in turning them to peaceful purposes to benefit all Americans after the war.

During the late 1980s and early 1990s, the research, development, and technology transfer programs at NFERC were refocused to solve agriculture-related environmental and waste problems. The Center changed its name and mission in 1990 to reflect this shift from fertilizer research to environmental research. This timely move is in the national interest because of the need to respond to increasingly serious environmental and waste issues associated with agricultural, industrial, and municipal operations. The objective is to keep U.S. agriculture sustainable, competitive, and environmentally sound.

NFERC is on the threshold of discovering innovative and cost-effective technologies to help meet environmental challenges that are in tune with President Clinton's vision for environmental stewardship. Funding for this program should not be eliminated so that innovations for environmental protection can be continued.

Let me cite a few examples of the current environmental and waste work at NFERC that is on target with the needs of the United States in this decade and in the 21st century:

APPROACHING CRISIS

The United States is rapidly approaching a crisis in management and disposal of agricultural, municipal, and industrial wastes. TVA's NFERC is researching ways to convert troublesome animal wastes such as poultry litter into feed supplements for animals, compositing to produce potting soils, and specialty crop nutrient sources. The Center is introducing technologies to convert industrial wastes into nutrient sources and ways to use sewage sludge on farmland.

As a nation, we generate about 240 million tons of municipal solid waste each year. Ten years ago, we had 14,000 landfills; today we have only about 5,000. And, EPA expects half of these to be closed in the next four years. The Center has developed and is currently transferring innovative technologies to convert a large part of municipal solid waste (MSW) into alternative fuels such as ethanol, chemicals, and clean-burning refuse-derived fuel for generating power.

Twenty-five percent of the rural wells in this country have nitrate-nitrogen levels that exceed 3 milligrams per liter. Although not critical, it is alarming and the signal is clear: we must solve agricultural nonpoint source problems before they get worse. More than 75 million Americans rely on groundwater as a source of drinking water.

NFERC is developing economically and environmentally sound nutrient management systems to help meet this challenge. This includes development of a soil nitrate test to discourage overfertilization, a practice which can lead to groundwater contamination.

The Center is developing technologies for controlled availability nutrient sources to prevent build-up of excessive amounts of nitrogen in soils.

It is creating and transferring technology to promote use of environmental safeguards at agricultural input dealers. These technologies are preventing releases of agricultural input manufacturing wastes—such as nutrients and pesticides—from entering surface and groundwater. These technologies are helping retailers across the United States keep their businesses prosperous and protect the jobs of hundreds of thousands of rural Americans.

Another serious problem area for the nation is the contamination of sites and waste streams. Many sites and waste streams nationwide have soils and waste streams that are contaminated with nutrients and pesticides. NFERC is developing cost-effective technologies to remediate these sites.

Scientists there are evaluating a variety of microorganisms to clean up waste sites. Bioremediation could be an economical way to clean up contamination sites.

NFERC is testing solar evaporator technology across the country. Using the power of the sun, water from pesticide-containing waste streams can be evaporated, reducing the amount of pesticide waste that must be treated with more costly technologies.

TVA has the only research facility of its kind to determine the potential of constructed wetlands for treating agricultural, municipal, and industrial waste streams. This technology is a promising tool for helping the nation's farmers, businessmen, and city officials treat increasingly serious waste stream problems.

NFERC's special expertise complements ongoing work at other agencies. NFERC is working closely with the private sector, USDA, and EPA in delivering its technological advances to ensure that no duplication of effort occurs. Recently, for example, NFERC, USDA, and EPA staffs met here in Washington to establish cooperative watershed and voluntary "green" projects that will rely heavily on the TVA national delivery system to introduce voluntary pollution prevention technologies to farmers and agribusinesses. Such cooperation prevents duplication and focuses the expertise of the agencies on problems that must be solved.

PRESIDENT CLINTON'S GOAL

These cooperative watershed and voluntary "green" projects are in concert with President Clinton's goal of solving environmental problems and creating more than 27,000 new jobs over a three-year priod—another example of how TVA is helping meet the Administration's environmental and economic agenda.

Mr. President, and my colleagues in the Senate, TVA's NFERC is conducting the kinds of environmental research and technology transfer programs that solve many of the environmental problems that President Clinton is effectively bringing to the attention of the nation. The TVA Center is already fulfilling part of President Clinton's plan for a long-term public investment program to invest $8 billion in environmental infrastructure, research, and technology transfer. It would make no sense to close this cost-effective, problem-solving research laboratory only to reestablish another, perhaps more costly one in its place.

The NFERC is on course with the nation's concern for solving and preventing agricultural, industrial, and municipal waste problems. I urge my colleagues to support the work of NFERC.

Thank you, Mr. Chairman.

LETTER FROM SENATOR HEFLIN

MARCH 1, 1993.

President WILLIAM J. CLINTON,
The White House, Washington, DC.

DEAR MR. PRESIDENT: I think it would be a serious mistake to terminate TVA's National Fertilizer and Environmental Research Center (NFERC). Instead, in my judgment, this center should be greatly expanded in light of your goal to invest in the future of America, particularly in the environmental area.

In recent years, NFERC has practically stopped its emphasis on fertilizer research and its scientific, engineering, and technology transfer teams have focused their expertise and energies on creating technologies to help keep agriculture productive and environmentally sound. In addition, NFERC's staff is addressing most of the environmental issues that you and Vice President Gore have effectively brought to the attention of the nation: municipal, industrial, and agricultural wastes, remediation of contaminated sites, pollution prevention, constructed wetlands, and water quality.

The reason given for the proposed termination of NFERC is that "the fertilizer industry is fully capable of financially supporting fertilizer research without the need for taxpayer subsidized work in TVA." I wish to point out that this has already been accomplished for all practical purposes.

Out of NFERC's 1993 budget of $34.3 million, only $1.5 million is devoted to fertilizer R&D. Most of this has to do with developing fertilizer that is environmentally sound. The remaining $32.8 million is spent exclusively on environmental research.

The following figures show the phase-out of fertilizer research over the last few years:

NFERC APPROPRIATIONS FOR THE YEARS 1980–93

[In thousands of dollars]

Year	Fertilizer	Environmental	Total
1980	47,284		47,284
1981	44,649		44,649
1982	41,510	2,911	44,421
1983	40,974	4,589	45,563
1984	44,039	5,681	49,720
1985	47,465	4,825	52,290
1986	39,042	3,787	42,829
1987	31,530	3,277	34,807
1988	30,377	3,246	33,623
1989	30,235	3,265	33,500
1990	5,709	27,322	33,031
1991	5,437	26,670	32,107
1992	5,112	29,188	34,300
1993	1,500	32,800	34,300

As the above chart illustrates, the emphasis of NFERC's work has shifted to R&D on the environment. I have enclosed a seven page summary of the Center's work in environmental technology for your review.

A review of the enclosed summary points out the long term importance of the research done in these vital areas. A visit to this research center would be most revealing. The Center has recently opened a constructed wetlands facility. This is the only constructed wetlands facility in the United States. The potential of this environmental technology research alone justifies the continuation of this center.

Your economic plan proposes in its long-term public investment program an $8 billion increase in environmental infrastructure, research, and technology which would accomplish much of what is already underway at NFERC.

Why kill an ongoing research center that is accomplishing many of your goals in order to create new programs with similar missions? It doesn't make sense. Instead of terminating this center, it ought to be enhanced.

NFERC is a national resource with a renowned staff of scientists, researchers, engineers, technicians, and analysts all working on solutions to environmental problems. The 448 member staff includes soil physicists, soil chemists, microbiologists, organic and inorganic chemists, agronomists, biologists, chemical engineers, environmental engineers, and experts on environmental compliance. The center has a 60 year working relationship with universities and other research organizations throughout the world.

In recognition of its outstanding reputation, the International Fertilizer Development Center (IFDC), which performs fertilizer research and development primarily for developing countries, chose to locate adjacent to NFERC in order to benefit from the expertise of the center.

Before any decision is made relative to the termination of NFERC, I hope that you will become thoroughly familiar with the environmental R&D already being conducted there. I urge you to have the environmental advisors on your staff visit the center and see firsthand the progress being made toward your goals of investing in the environmental well being of the nation, as well as your desire for the further investment in technology that will reap benefits for our nation in many ways, including spinoffs in related and unrelated fields. If they do so, I believe they will recommend to expand NFERC rather than terminating it.

With kindest regards, I am

Sincerely,

HOWELL HEFLIN.

NATIONAL FERTILIZER AND ENVIRONMENTAL RESEARCH CENTER

In fiscal year 1991, we shifted emphasis from traditional fertilizer research and development activities to research and development on the environmental aspects of wastes and of comprehensive nutrient management and use. We continued in fiscal year 1992 and fiscal year 1993 on this refocusing; thus, research program elements and funding levels have retained similar themes and levels.

We continue to address three major elements in environmental research activities: Wastes and By-products, Nutrients and Water Quality, and Remediation.

WASTES AND BY-PRODUCTS R&D

Municipal solid wastes.—Given a trend toward a decline in landfill space and environmental awareness, there is need for reduction in the volume of municipal solid waste (MSW) and an emphasis on recycle and reuse. TVA continues to work on process research and demonstration of MSW reduction, recycle, and reuse in the Valley and nation. For example, TVA has developed technologies for the chemical and biological conversion of hardwoods and other cellulosic sources to ethanol and other chemicals. In 1992, these technologies were adapted to convert the cellulosic fraction of municipal solid waste into ethanol, other chemicals, and a clean-burning refuse-derived fuel that can be used to fire boilers. In 1993, a contract was finalized to provide these technologies, including pilot plant facilities, to a private business. Their intent is to build a commercial-scale conversion facility for treatment of MSW.

Animal wastes.—We continue to research ways to convert animal wastes, especially poultry litter, into value-added products to offer producers an alternative to the potentially harmful practice of land-spreading on limited acreages near their operation. Approaches include: use as a feed supplement for ruminant animals, conversion to fertilizers, and composting to produce potting soil or substitutes for peat moss. The poultry litter composting research identified regional, national, and global needs to more completely understand the composting process and effectively transfer composting technology. As a result, work is under way to establish a composting research and demonstration facility at TVA. Talks in a similar context also are in their infancy with entities representing pork producers.

Industrial wastes.—TVA staff are studying technologies that use high-volume industrial wastes and by-products as economical fertilizer intermediate. Emphasis remains on sulfur- and nitrogen-containing wastes and waste acids. Staff also are doing bench-scale testing of processes to satisfactorily granulate industrial wastes and by-products using techniques such as compaction, pelletizing, and extrusion.

Coproduction for electricity.—TVA has been collaborating with the Electric Power Research Institute to explore the potential of coal gasification for coproduction of electricity and fertilizer. The gasification route nets about 15 percent greater energy recovery than conventional coal-fired plants. It also is much cleaner environmentally.

NUTRIENTS AND WATER QUALITY R&D

Nutrient management and prevention of nonpoint source pollution.—Agricultural practices, including use of plant nutrients, can lead to nonpoint source pollution problems. Improved nutrient management is recognized by experts and practitioners nationwide as a key tactic to address water quality problems in the nation's coastal waters, groundwater, and inland surface waters. TVA is involved in a number of research efforts to develop environmentally and economically sound nutrient management systems for producing food, feed, and fiber.

—We are conducting research on the development and introduction of agricultural practices which reduce the potential for nonpoint source pollution of water resources, and on the development of products to increase effectiveness and reduce adverse environmental impacts by matching the delivery of nutrients to plant uptake. This includes work with gels and polymer coatings and matrices.

—Through in-house and cooperative research with universities, we are developing and evaluating a variety of practices to maximize nutrient recovery by crops and minimize adverse environmental impacts, especially nitrate contamination of groundwater. We are coordinating an effort in the humid regions of the country to develop and introduce a soil test for nitrogen availability. Use of the test will discourage overfertilization, a practice which can lead to pollution.

—We are evaluating the potential for using winter cover crops to capture excess nitrogen remaining after crop harvest to prevent nitrate movement to groundwater, evaluating the effect of manure applications on downward movement of nitrates, and developing controlled availability nutrient sources to prevent build-up of excess amounts of nitrogen in soils.

—We are developing ways to increase crop yields by adjusting the ratio of ammonium and nitrate forms of nitrogen in the soil. By increasing the amount of nitrogen harvested in the crop, the potential for nitrogen movement to groundwater is reduced and economic return is increased. Increased yields have been demonstrated with several cereal crops.

—We also conduct cooperative research with universities and experiment stations across the nation. These basic and applied research projects also serve as demonstrations to introduce and transfer environmental technologies more widely. Emphasis is on developing and introducing technologies and practices that reduce or eliminate nonpoint source pollution.

—We are developing and introducing best management practices that can be used by fertilizer dealers and attendant agricultural retailers in operating their plants and businesses in environmentally acceptable ways.

—We also are sponsoring 20 nationwide model site demonstrations centered around containment technologies to serve as "real-life" laboratories for researchers, technologists, educators, and practitioners. This will help prevent pollution of surface and groundwater from fertilizer and agrichemical operations.

Constructed wetlands R&D.—Using a newly constructed wetlands research facility, the only such facility in the United States, we conduct basic and applied research leading to innovative, low-cost, and low-maintenance designs for wastewater and runoff treatment using constructed wetlands technology. Results from the research and development at this facility will be used to: (1) improve the efficiency of existing constructed wetlands designed to treat municipal and residential wastewaters; (2) extend the application of constructed wetlands technology for removing a variety of pollutants from rural and urban runoff and from industrial wastewaters; and (3) increase understanding of how and why naturally formed, as well as constructed, wetlands work.

REMEDIATION TECHNOLOGIES

Background.—Many sites have soils and aqueous streams contaminated with agricultural chemicals. Several states currently permit land application of such contaminated materials under certain conditions. However, this practice may be limited in the future. TVA is developing alternative technologies for treating these materials ranging from bioremediation to simple physical separation or more sophisticated physical/chemical techniques.

Bioremediation.—Research is under way by TVA to evaluate various microorganisms to break down pesticides and determine optimum chemical, physical, and biological conditions to enhance bioremediation of soils.

Photocatalytic and chemical oxidation processes.—Development of such processes are under way. These technologies could provide economical methods for destroying pesticides in contaminated wastewaters, rinsates, and storm water using relatively simple equipment.

Solar evaporator technology.—Research supported by the Alabama Universities/TVA Research Consortium has led to the development of a solar evaporator/concentrator for remediating small-quantity waste streams. A successful demonstration of the solar evaporator was completed at an industrial metal plating facility. In Washington and Idaho, TVA is demonstrating solar concentration of pesticide-containing water; and at Utah State University, we are demonstrating the degradation of pesticides in contaminated soil. A test unit also is operating at TVA in Muscle Shoals.

Supercritical fluid extraction.—Where pesticide concentrations in soils are high, bioremediation treatment methods will likely be ineffective. The most common treatment method is incineration. TVA investigated possible technologies that would eliminate the high costs and hazards of transporting contaminated soils to a remote incineration site. One alternative evaluated was a portable supercritical fluid extraction unit. Resulting economics are poor at this time for remediating pesticide contaminated soils. However, this technology is a possible replacement for hazardous and ozone-depleting cleaning solvents that are being banned by EPA. These solvents are routinely used in many businesses, such as the cleaning of small parts; and at this time, there are no clear alternatives available. TVA is conducting preliminary evaluations on the effectiveness and economical competitiveness of supercritical fluid extraction technology in replacing the banned solvents.

Elemental phosphorus sludge.—As part of an environmental cleanup program at the NFERC site, under the direction of the U.S. EPA under the Resource Conservation and Recovery Act (RCRA), TVA is developing a process to remediate elemental phosphorus sludge while producing a usable product with no residual by-product. Development of this process will allow TVA to remediate a potentially dangerous environmental problem at its NFERC site and provide solutions to phosphorus problems in other industries such as pharmaceuticals and food processing.

The National Fertilizer and Environmental Research Center serves the Tennessee Valley region and the nation by developing and introducing technologies that enhance agriculture and the environment. It developed most of the technology used to make the fertilizers that fuel America's food abundance. And now, significant agricultural, industrial, natural resource, and societal trends have influenced the Center's direction and responsibilities. Paramount among these trends are greater concern for the environment, natural resource conservation, and nonrenewable resource management.

Over the past 60 years, NFERC scientists and engineers did not stop with developing fertilizer technology, but they researched and encouraged efficient fertilizer use practices and environmental stewardship. This scientific and technical base, together with attendant human capital, has provided an increasing rationale and entree for solving environmental and waste problems associated with agricultural, industrial, and municipal operations.

The vision of the Center is to be the preferred supplier of many agricultural and environmental technologies. Examples of key activities at the Center reflect this vision.

NUTRIENT MANAGEMENT TECHNOLOGIES AND PREVENTION OF NONPOINT SOURCE POLLUTION

National studies have documented that significant portions of the nation's coastal waters, groundwater, and inland surface waters are either impaired or threatened by excessive nutrient levels. Effective nutrient management is recognized by federal, state, regional, and local institutions and entities as an essential measure for preventing nonpoint source pollution. It also provides producers a means to enhance both yields and profits to sustain themselves economically. This has potential to contribute, support, or enhance a strong rural infrastructure.

Efforts under way at TVA to develop and introduce nutrient management technologies and practices that will sustain U.S. agricultural production in an environmentally acceptable way include:

—Controlled availability research to develop cost-effective controlled release mechanisms to offer more efficiency in growing plants' use of nutrients and thus reduce residual nutrient release. This includes work with gels and polymer coatings and matrices.

—Improved Agricultural Practices Development which reduces the potential for nonpoint source pollution of ground and surface waters. This includes research to: (1) determine which winter cover crops are most effective in capturing excess nitrogen in soils to prevent its movement into groundwater; (2) show that maintaining nitrogen in the ammonium form by inhibiting nitrification can increase yields, improve nitrogen use efficiency, and reduce adverse environmental impacts of nitrogen fertilizers; and (3) develop and introduce a soil test for nitrogen availability in the humid regions of the country to discourage overfertilization.

—Improved Environmental Practices Demonstrations and Related Activities with Industry. We are sponsoring 20 model site demonstrations and related educational forums in the Valley and across the nation to test and demonstrate improved practices to prevent contamination from fertilizer and pesticide mixing operations. These sites are augmented by over 25 other demonstrations that highlight individual areas of interest or novel designs. Participants in these demonstrations are strategically positioned to help farmers become better stewards of the environment.

TECHNOLOGIES TO TREAT OR USE INDUSTRIAL, AGRICULTURAL, AND MUNICIPAL WASTES

Efforts to use these wastes in an environmentally and economically acceptable manner include:

Constructed wetlands.—Using a newly constructed wetlands research facility, the only such facility in the United States, we are conducting research to gather basic information on how constructed wetlands can be used to clean up a variety of industrial, agricultural, and municipal waste streams.

Municipal solid wastes.—The decline in landfill space coupled with increased environmental awareness suggests a need for reduction in the volume of municipal solid waste (MSW) and an emphasis on recycle and reuse. TVA continues to work on process research and demonstration of MSW reduction, recycle, and reuse in the Valley and nation.

Animal wastes.—The Center continues to research ways to convert animal wastes, especially poultry litter, into value-added products to offer producers an alternative to the potentially harmful practice of land-spreading on limited acreages near their operation. We have made initial efforts to work with pork producers as well in a similar context. This work has resulted in the establishment of a composting research and demonstration facility at TVA.

Industrial by-products.—Staff at the Center are studying ways to convert some industrial by-products into economical fertilizer intermediates. Attendant bench-scale testing is under way on processes to satisfactorily granulate industrial wastes and by-products using techniques such as compaction, pelletizing, and extrusion.

Coproduction demonstration project.—TVA staff is exploring (in collaboration with Electric Power Research Institute) the potential of coal gasification for coproduction of electricity and fertilizer. The gasification route nets about 15 percent greater energy recovery than conventional coal-fired plants and is cleaner environmentally.

Pollution prevention/remediation.—Many sites have soils and aqueous streams contaminated with agricultural chemicals. TVA is developing alternative technologies for treating these materials. Technologies being addressed include bioremediation, photocatalytic and chemical oxidation processes, solar evaporation, and supercritical fluid extraction.

STEWARDSHIP AND ENVIRONMENTAL COMPLIANCE AT NFERC

At its NFERC site, TVA is conducting significant stewardship and related activities. These include:

Facility removal.—A major effort is underway to remove obsolete buildings and plant production facilities that are no longer needed. In 1992, several production facilities were sold and removed and selected buildings were demolished.

Environmental cleanup.—TVA is conducting an environmental cleanup program at the plant site under the direction of the U.S. Environmental Protection Agency under the Resource Conservation and Recovery Act (RCRA). Sampling and analysis of all the solid waste management units (SWMUs) will be completed in 1993 and site remediation will begin.

Remediation technologies for phosphate wastes.—As part of the RCRA project, TVA is developing a process to remediate elemental phosphorus sludge while producing a usable product with no residual by-product. The development of this process has implications for use in other industries such as pharmaceuticals and food processing.

DEVELOPMENT OF TECHNOLOGIES THROUGH WORK-FOR-OTHERS PROGRAM

Development of these technologies provide for activities such as:

Environmental assessments at military or industrial sites.—These are investigative evaluations of sites which provide findings, corrective actions needed based on regulatory requirements, and suggested best management practices.

Environmental remediation at military or industrial sites.—These involve technologies required for required cleanup of selected sites.

Waste conversion and utilization.—The activities in these areas are varied and diverse depending on the specific case to be addressed.

Chemical treaty compliance.—This is an innovative project in that the Department of the Army contracts with NFERC for chemical and environmental expertise to evaluate the provisions of the proposed Chemical Weapons Reduction Treaty between the United States and the former Soviet Union.

STATEMENT OF RICHARD PLATT, DIRECTOR, PLANNING AND COMMUNITY DEVELOPMENT, NORTHPORT, AL

Dear Senator Heflin, enclosed is a brief I will use in testifying, before Mr. Bevill's subcommittee at 12 noon, Monday, March 29, 1993.

I have requested the opportunity to testify before Senator Bennett Johnston's subcommittee also.

I look forward to calling upon your office March 29–30, 1993.

Thank you.

FEDERAL FUNDING OF CONSTRUCTION OF THE NORTHPORT, AL, FLOOD CONTROL LEVEE—BLACK WARRIOR RIVER

The Mobile District, U.S. Army Corps of Engineers completed the initial Reconnaissance Study of the Northport Flood Control Levee which revealed economic justification and verified Federal interest in the project.

The final Feasibility (Design and Location) Study is underway and construction of the levee would follow and be completed in mid 1995 if the necessary federal appropriations are obtained in fiscal year 1994.

The total cost construction of the levee is estimated to be $1,400,000. The Federal share (75%) would be $1,050,000. The local match would be $350,000, provided by the City of Northport.

Your support for this important project is crucial and most appreciated by all in our community.

NORTHPORT, TUSCALOOSA COUNTY, AL, FLOOD CONTROL LEVEE JUSTIFICATION—BLACK WARRIOR RIVER

Northport's estimated population of 20,000 people makes it the fastest growing City of its size in the State of Alabama. Since the first permanent settlement in 1813, the City has been subjected to catastrophic flooding from the Black Warrior River. No serious public measures have ever been undertaken to provide flood protection, Since incorporation in 1871, City Hall has been relocated to higher ground three times.

The flood prone area of the City consists of over eight hundred acres. The Flood Control Levee, Proposed by the US Army Corps of Engineers Mobile District, would provide flood protection against the average 100 year flood level for over five hundred acres of the city including the historic downtown commercial district, a large industrial district and a considerable residential area including public housing. It will also protect and render possible a planned Renaissance development—including a River Heritage and Artifacts Museum, a 5,000 seat amphitheater, Kentucky, Central West Alabama Arts and Crafts Center, a scenic parkway, downtown revitalization and other riverfront attractions. A one and one half million dollar street improvement project has been approved and a nine million dollar municipal Wastewater Treatment Plant is presently under construction. A multimillion dollar federal lock and dam has recently been completed according to the U.S. Army Corps of Engineers, Studies of the cost benefit ratio substantiates justification for the Levee under Section 205 of the Federal Flood Control Act of 1940 as amended.

The Flood Control Levee would facilitate the following benefits to the City and its residents as well as commercial, and industrial businesses.

—Floodproofing against severe 100 year flood levels and reduction of casualty insurance and flood insurance costs.
—Encourage new construction, expansion and rehabilitation of existing structures and other economic development and public improvements.
—Increase tourism, trade, manufacturing, commerce and industry.
—Reclaim and maximize use of two hundred acres of river front lands.
—Increased tax base.
—Increase in property values.
—Savings in flood damage losses, repairs, and clean up costs.
—Improved health, sanitation and quality of life.
—Creation and retention of jobs.
—Facilitate development of Northport Renaissance Plan and downtown revitalization.

Cost of construction is one million four hundred thousand dollars ($1,400,000). The City of Northport would provide a twenty-five percent match ($350,000) leaving a federal requirement of one million fifty thousand ($1,050,000).

It is requested that federal funding in the amount of $1,050,000 be authorized and appropriated for this project.

COST ESTIMATE, LEVEE PLAN, NORTHPORT

	Quantity	Unit	Cost	Total
Land and damages:				
Acquisition				$414,799
R.E. administration				104,000
Contingencies				61,000
Relocations				
Levees:				
Clear and grub	15	Ac	$2,811	42,168
Compacted fill	75,250	CY	3	221,073
Seed and mulch	10	Ac	2,226	22,264
Closure structures	3	Ea	22,583	67,745
Erosion control	1	LS	2,456	2,456
Sod at bulkhead	360	SF	4	1,506
Culverts	900	LF	120	107,853
Demolish metal building	1	LS	15,154	15,155
Restore disposal area	1	LS	9,044	9,044
Haul road maintenance	1	LS	11,111	11,111
Excavation for drainage	5,350	CY	3	18,537
Contingencies				103,000
Planning, engineering, and design				115,000
Construction management				62,000
Subtotal				1,378,711
Interest during construction [1]				19,512
Total project cost				1,398,223

[1] Construction period is one-third years; interest at 8.5% accrues at midpoint of period. $1,046,400 (.085 times .333 times 0.5) equals $14,800. Operation and maintenance cost equals $14,200.

STATEMENT OF JOSEPH LEMA, VICE PRESIDENT FOR TRANSPORTATION, NATIONAL COAL ASSOCIATION

Senator JOHNSTON. We have a large number of witnesses who wish to be heard this afternoon. So, in accordance with our notification to each of the witnesses, it will take some discipline and self-restraint on the part of everyone to hold their oral testimony to a minimum.

I would invite your attention to the schedule. Do the witnesses have the schedule? We have a schedule here and we are exactly on schedule.

We will begin with the National Coal Association, with Joseph Lema, vice president for transportation, who will be recognized for 5 minutes.

Mr. Lema, welcome to the committee.

Mr. LEMA. Thank you, Mr. Chairman. My name is Joe Lema. I am vice president for transportation of the National Coal Association.

I respectfully request that the full statement I have filed with the subcommittee be incorporated into the hearing record.

Senator JOHNSTON. Your full statement and all others will be not only incorporated in the record, and will be very carefully studied.

COAL AND THE INLAND WATERWAY SYSTEM

Mr. LEMA. I will simply present a summary of our appropriations request for fiscal 1994.

Coal is a principal commodity moved on the inland waterways system and will continue to be shipped in large amounts by intermodal rail-barge and truck-barge transportation systems to utility plants located inland and on the gulf coast, as well as to gulf coast ports, for transfer into export commerce.

This subcommittee has recognized the benefits possible by investing in waterways construction and rehabilitation projects to preserve the efficiency of barge transportation for many years, especially through appropriations for projects which were authorized in the milestone 1986 Water Resources Development Act and subsequently in authorizations enacted in 1988, 1990, and 1992.

We are grateful for your leadership in that regard and for progress in construction at several projects since 1986. That includes completion of the William Bacon Oliver Lock and Dam project on the Black Warrior River and the opening in January 1993 of the Robert C. Byrd Locks and Dam on the Ohio River, which already has eliminated serious losses previously encountered due to barge congestion at that facility, formerly known as the Gallipolis Locks and Dam.

SYSTEM APPROACH TO NAVIGATION IMPROVEMENTS

Using a systems approach toward identifying problems and needs on the inland waterways, NCA now has analyzed current and projected traffic demand, and urges that priority be dedicated to several construction projects on what we have designated as the Ohio River basin intermodal services [ORBIS] corridor, a 2,500-mile network formed by the Ohio River and interconnecting portions of the Tennessee, Cumberland, Green, Big Sandy, Kanawha, and Monongahela Rivers in the States of Illinois, Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia.

The specific projects for which we seek approval of fiscal 1994 appropriations are named in my full statement, along with project purposes and objectives.

We believe it is desirable and appropriate to move ahead now with waterways infrastructure projects in the ORBIS corridor that will result in having twin 1,200- by 110-foot locks at facilities on the Ohio River from its junction with the Mississippi River upstream to Louisville, KY, 720- by 84-foot main lock chambers on the Monongahela River from Pittsburgh upstream to the West Virginia State line, 800- by 110-foot lock chambers on the Kanawha River upstream from its junction with the Ohio River to the Marmet Pool, and the addition of a 1,200- by 110-foot lock chamber at the Kentucky Lock and Dam on the Tennessee River near its junction with the Ohio River.

Mr. Chairman, we believe that the projects we have identified are justified and fit well into a systems approach toward meeting needs for preserving critical navigation efficiency.

COST-SHARING REQUIREMENTS

Further, we believe that those projects warrant funding under the cost sharing provisions of the 1986 act, which call for commercial users of the waterways to pay 50 percent of construction costs through a barge fuel tax that rises to 20 cents per gallon by 1995, and provide that the Federal Government will bear 100 percent of the costs of waterways operation and maintenance by the U.S. Army Corps of Engineers.

That cost-sharing arrangement appropriately takes into account that commercial traffic should not—I emphasize that commercial traffic should not be called upon to pay for nonnavigation benefits such as flood control, water supply, hydropower generation, and recreational boating.

It also takes into account that private entities contribute the river terminals and provide access to the terminals, with States and local agencies proving highway connections, substantial non-Federal investments.

BARGE FUEL TAX FOR O&M

We have, of course, become aware of an administration proposal to add a new $1 per gallon barge fuel tax with revenues to fund operation and maintenance.

We are urging rejection of that proposal with the view that the cost sharing provisions of the 1986 act are appropriate.

And to increase barge fuel taxes by more than 600 percent would cause consumer rates for electricity generated by coal-fired plants to increase severely and would be a critical blow to U.S. coal exports, circumstances that would have extremely negative effects on the U.S. economy.

Mr. Chairman, thank you for allow NCA to appear before you. I will be glad to answer your questions now and subsequently.

Senator JOHNSTON. Mr. Lema, we are always glad to have the coal association here. I am glad you alluded to the inland waterway fee. I was going to mention that if you had not.

And I alert you and all other witnesses to use all of your contacts in the Congress and the administration to seek to kill this ill-advised tax. It would mean the death of export coal and grain; as well as the death of Tenn-Tom, the Black Warrior, you name it, Red River navigation systems around the country.

It would put traffic from the inland waterways, which are the most fuel efficient of all means to transportation and put it on trucks which use the most gasoline and go exactly opposite to the way that the environmentalists want us to go and the country should go.

So, I am glad you mentioned that. And we appreciate your testimony.

Mr. LEMA. Mr. Chairman, may I just say in conclusion that Gen. Dick Lawson, the president of the National Coal Association and my boss, totally concurs with your view, as I do.

Thank you.

Senator JOHNSTON. Thank you very much.

[The statement follows:]

STATEMENT OF JOSEPH E. LEMA

SUMMARY

Mr. Chairman and members of the subcommittee, my name is Joseph E. Lema. I am National Coal Association's vice president for transportation. My purpose in appearing before you is to urge your approval of Fiscal 1994 appropriations to fund continued progress in construction of navigation projects on the Ohio River System.

Your previous actions to approve appropriations annually since enactment of the Water Resources Development Act of 1986, which established a balanced method of funding waterways navigation programs, have advanced highly the goal of preserving efficient, competitive barge traffic services needed to move coal and other bulk freight with full utilization of intermodal rail-barge and truck-barge operations. To continue the course toward meeting adequately the demand for barge traffic services, we urge approval of Fiscal 1994 appropriations for the inland waterways projects identified below.

Ohio River system navigation segment/project	Objective	Funding purpose
Ohio River:		
Olmsted	Replace locks and dams 52 and 53 with twin 1,200 x 110-foot locks.	Construction.
Uniontown, Newburgh, and Cannelton.	Add second 1,200 x 110-foot lock at each of three locks and dams.	Feasibility study.
McAlpine	Add second 1,200 x 110-foot lock chamber.	Preconstruction engineering and design and construction.
Kanawha River:		
Winfield	Add second 1,200 x 110-foot lock chamber	Construction
Marmet	Build new 800 x 110-foot lock chamber	Preconstruction engineering and design.
Monongahela River:		
Lock and dam 2	Replace obsolete structures with a modern facility	PED&C.
Lock and dam 3	Remove lock and dam.	PED&C.
Lock and dam 4	Replace with twin 720 x 84-foot locks.	PED&C.
Grays Landing	Build new 720 x 84-foot lock chamber.	Construction.
Point Marion	Build new 720 x 84-foot lock chamber.	Construction.
Tennessee River, Kentucky	Add new 1,200 x 110-foot lock chamber.	PED&C.

The above projects, joined with the new, modem Robert C. Byrd Locks and Dam on the Ohio River (formerly the Gallipolis L&D) which opened to navigation on January 30, are an integrated traffic network.

COAL AND THE INLAND WATERWAYS—A SYSTEMS APPROACH BY NCA

NCA, in our evaluation of inland waterways utilization and needs, takes a system approach toward determining areas in which construction should be undertaken to preserve efficiency and competitiveness of barge transportation. Coal traffic is spread across the 11,000-mile inland and intracoastal waterways network, especially on the Mississippi, Ohio, and Warrior-Tombigbee River System, including their interconnected rivers and tributaries. More than 150 million tons of coal are moved annually on the waterways to utilities and to Gulf Coast ports where coal is transshipped into coastal and export trade.

Today, and in the short-run based on current and projected barge coal traffic demand, a 2,500-mile portion of the total waterways network is especially critical from the viewpoint of transportation problem and needs. That 2,500-mile sub-network in the 11,000-mile overall network of interconnected waterways consists of the Ohio River from Pittsburgh to Cairo, Illinois where the Ohio River junctions with the Mississippi, and connecting segments of the Tennessee, Big Sandy, Kanawha, and Monongahela Rivers in the states of Illinois, Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia.

The U.S. Army Corps of Engineers furnishes several facts of importance with respect to the sub-network which NCA refers to as the Ohio River Basin Intermodal Services (ORBIS) Corridor. Approximately 250 million tons of cargo moved an average of 275 miles on the ORBIS Corridor sub-network in 1991; and traffic levels continue to grow, averaging five percent per year over the past decade. Further, at certain locks, particularly on the Lower Ohio River, growth substantially exceeds the five percent average annual growth rate across the sub-network. The traffic included coal, chemicals, grams, aggregates, minerals, refined petroleum products, and other commodities, with coal the predominant item.

There are 60 locks and dams on this ORBIS Corridor, characterized by numerous modern river coal terminals which connect highway and rail freight movements with barge lines efficiently, thus facilitating intermodal rail-barge and truck-barge shipments, as well as furnishing effective points for in-transit coal storage and blending.

Our goal with respect to the ORBIS Corridor is to eliminate barge traffic bottlenecks by, in the short-run, having in place:

—Twin 1200′ x 110′ locks at Olmsted (replacing L&D's 52&53), Smithland, Uniontown, Newburgh, Cannelton, and McAlpine—a stretch of the Lower Ohio River from its junction with the Mississippi River to Louisville, Kentucky;

—1200′ x 110′ main lock chambers and 600′ x 110′ auxiliary lock chambers at locks and dams on the Ohio River upstream from Louisville, Kentucky—an objective served well by the January 30,1993 opening of the new Robert C. Byrd Locks and Dam on the Ohio River just below its junction with the Kanawha River (formerly the Gallipolis Locks & Dam);

—720′ x 84′ main lock chambers at L&D's on the Monongahela River from Pittsburgh upstream to the Pennsylvania-West Virginia state line which is downstream from Morgantown, West Virginia, except for L&D 2 which has a 720′ x 110′ main lock chamber;

—800′ x 110′ lock chambers at Winfield and Marmet L&D's on the Kanawha River upstream from its junction with the Ohio River; and

—1200′ x 110′ lock chamber at the Kentucky Lock and Dam on the Tennessee River upstream from its junction with the Ohio River.

Those waterways construction projects are recommended in consideration of three principal criteria: (1) barge traffic demand at present and in the short-run; (2) uniform lockage capacity for consecutive lock and dam projects in selected river stretches having similar traffic flows within those stretches; and (3) scheduling of construction at consecutive lock and dam projects in selected river stretches concurrently where possible to reduce the probability that completion of a certain improvement simply moves congestion to the next lock and dam when it too warrants having similar capacity.

LOWER OHIO RIVER PROJECTS IN THE ORBIS CORRIDOR

There are five ORBIS Corridor projects on the Lower Ohio River for which NCA seeks Fiscal 1994 appropriations, which involve six locations inasmuch as the Olmsted project will replace Locks and Dams 52 and 53 with a single modern facility having twin high-lift, 1200′ x 110′ lock chambers. The others are the Uniontown, Newburgh, Cannelton, and McAlpine facilities moving upstream on the Ohio River above the Olmsted project and the nearby junction of the Ohio River and the Mississippi River.

The stretch of the Ohio River from its junction with the Mississippi River to Louisville, Kentucky provides a classic example of how the ORBIS Corridor serves intermodal freight transportation, with modern river terminal facilities at many locations at or near Metropolis, Illinois; Mount Vernon, Evansville, and New Albany, Indiana; and Paducah, Owensboro, and Louisville, Kentucky. Such intermodal facilities, along with others like them on the Upper Ohio River, the Big Sandy River, the Kanawha River, and other rivers connecting with the Ohio River in the ORBIS Corridor, focused on storing, blending, and transferring coal from rail carriers and trucks to barge tows, exemplify the intent of title V of the Intermodal Surface Transportation Efficiency Act (ISTEA), enacted in 1991. Title V provides that measures be taken to promote efficiency in the movement of freight by surface transportation modes, e.g. railroads, trucks, and barge lines. Private investments in building, operating, and maintaining river terminals like those in the ORBIS Corridor, along with investments by state and local governments in furnishing highway access to these terminals, as well as by railroads in providing connecting railroad services should be complemented by federal actions under jurisdiction of the U.S. Army Corps of Engineers to construct lock and dam projects aimed at reducing congestion on the inland waterways, thereby uniting the several entities involved in surface transportation to assure that the goals of ISTEA with respect to intermodal transportation are fully met.

The Olmsted project is authorized, and construction has begun. Its replacement of the archaic Locks and Dams 52 and 53 is crucial for efficient barge navigation throughout the year at the Ohio River System's gateway to the Mississippi River and its access to the Gulf Coast. The main lock chambers at the facilities to be replaced by the Olmsted project were opened in 1928, and are grossly inadequate, justifying the highest priority in securing early progress toward completing construction. In fact, the dams at the existing facilities also are wholly inadequate for containment of their pools when high water conditions are experienced each year.

Upstream from the Olmsted project, the Locks and Dams at Uniontown, Newburgh, and Cannelton should be the subject of expedited feasibility studies on matching their lockage capacities with the new Olmsted project now under construction, and with the next upstream facility, the McAlpine Locks and Dam at Louisville. Like Olmsted, the presently authorized McAlpine project will have two 1200′ x 110′ locks upon completion of construction. The need for additional capacity at the Uniontown, Newburgh, and Cannelton facilities located between the Olmsted and the McAlpine projects is underscored by the six percent average annual traffic growth rate measured at Uniontown, where locks handled 83 million tons of traffic in 1991. Serious bottlenecks are especially prevalent during periodic closures of the main lock chamber at Uniontown. For example, the Army Corps of Engineers reported that, during a 46-day closure of the main lock at Uniontown in 1989, 854 tows were delayed a total of almost 40,000 hours, with an average delay of 47 hours per tow. The Corps estimates the delay costs amounted to nearly $12 million.

The Lower Ohio River portion of the ORBIS Corridor offers a classic example of merits in placing high priority for construction projects in the 2,500-mile Ohio River System. Its intermodal rail-barge and truck-barge movements facilitated by modern river terminals are complemented by the fact that ORBIS Corridor navigation channels remain open year-round, through winter as well as other months; and with coal as the predominant commodity carried, the traffic demand stays high throughout weeks and months of each year. Utility power generation, the heaviest demand for barge traffic services in the ORBIS Corridor, requires timely deliveries of coal year-round to assure uninterrupted availability of electricity for industrial, commercial, and residential consumers in the east, the midwest, the south, and the upper midwest. Joined with the use of the ORBIS Corridor for utility coal shipments, significant movements of export coal and utility coal to be shipped in coastal commerce on the Gulf Coast originating from Ohio Basin mines, make the Ohio River System a full-time, major asset in the nation's freight transportation network.

ORBIS CORRIDOR PROJECTS ON THE KANAWHA, MONONGAHELA, AND TENNESSEE RIVERS, INTERCONNECTED WITH THE OHIO RIVER

The construction of a new 800′ x 110′ lock chamber at Winfield on the Kanawha River will relieve one of the most severely congested points on the inland waterways system. That project, now authorized and under construction, should be matched with a similar project at Marmet, a soon-to-be 60 year old structure upstream from the Winfield facility, thereby furnishing uniform lockage capacity from the Marmet pool downstream to the Kanawha River's junction with the Ohio River just above the newly constructed Robert C. Byrd Locks and Dam. Matching the capacities of the Winfield and Marmet facilities concurrently both avoids failure in alleviating Kanawha River congestion if only half of the bottleneck problem were to be treated, and provides for efficient barge traffic access to the substantial reserves of high quality coal in the Kanawha Valley.

On the Monongahela River in Pennsylvania, presently authorized projects at Locks and Dams 2, 3, 4, Grays Landing, and Point Marion are critically needed to overcome obsolescence in structures severely deteriorated since first built in 1907, 1926, 1932, and 1951, and to provide uniform 720′ x 84′ lock chambers on the river stretch upstream from Pittsburgh to the Pennsylvania-West Virginia state line. With regard to the Kentucky Lock and Dam on the Tennessee River just upstream from its junction with the Ohio River, the Corps has determined that the addition of a 1200′ x 110′ lock chamber is warranted, and has a 1.5-to-1.0 benefit-cost ratio. This strategic gateway to the Tennessee Valley presently has only a single 600′ lock chamber built in 1944. Preconstruction engineering and design efforts should be expedited to enable an early start of construction upon Congressional authorization.

COAL AND EFFICIENT WATERWAYS TRANSPORTATION ARE FACTORS IN KEEPING THE U.S. COMPETITIVE

Coal is the economic, secure fuel of choice for generating 56 percent of the electricity consumed in the U.S., with utility coal consumption estimated at 786 million tons in 1992, up from 773 million tons in 1990 and in 1991, and projected to rise to 795 million tons in 1993. In addition, coal accounts for approximately $4.5 billion annually on the positive side of our international trade balance through U.S. coal exports. Coal, therefore, is a major contributor to our nation's competitiveness in domestic and world commerce and trade.

Much of the one billion tons of coal produced annually in the U.S. during the 90's relies on efficient waterways transportation services. That circumstance leads NCA to urge members of the subcommittee to continue providing leadership in preserving effective commercial navigation on the waterways, with priority dedicated to selected construction projects in the ORBIS Corridor referred to in my testimony. The construction projects in progress since enactment of the 1986 Water Resources Development Act, with further authorizations in 1988, 1990, and 1992, linked especially with appropriations under this subcommittee's jurisdiction in each of the eight fiscal years following the milestone 1986 Act, are a clear indication of our ability to move forward in a timely manner with well-justified improvement work. With that in mind, I warmly appreciate this opportunity to testify on Fiscal 1994 projects and the related appropriations needed to assure preservation of efficient commercial navigation vital to our competitiveness in the 90's and succeeding years.

OHIO RIVER NAVIGATION SYSTEM

STATEMENT OF R. BARRY PALMER, EXECUTIVE DIRECTOR, DINAMO

ACCOMPANIED BY DAVID CRISER, GENERAL MANAGER, MARINE DIVISION, CONSOLIDATED COAL CO.

Senator JOHNSTON. Next, we will hear from DINAMO, R. Barry Palmer, who is executive director of the association.

Mr. PALMER. Thank you, Mr. Chairman. I am Barry Palmer, the executive director of DINAMO, which is an acronym for the Association for the Development of Inland Navigation in America's Ohio Valley.

I have joining me, Mr. David Kreutzer, who is the general manager of the marine division of Consolidated Coal, based in Pittsburgh, PA.

DINAMO is a coalition of leaders from business, labor, and State government throughout the Ohio Valley. And we are dedicated to the advancement of urgently needed modernization of navigation works on the Ohio River navigation system.

A new administration in Washington, seeking to inspire a Nation to think in terms of investing, investing in people, investing in infrastructure, investing in the future, investing in America, would do well to see the inland waterways as both the model and the methodology for what works.

All Federal navigation investments are subject to rigorous cost-benefit analysis in which the public benefits much exceed the public costs. It is all there in black, not red ink, for anyone to see.

DINAMO has and always will be supportive of lock and dam modernization projects in the Ohio Valley where, clearly, the benefits of the Government investment are greater than the cost.

And it has taken a dynamic partnership to move this Nation forward in the eighties and the nineties on waterways development, Mr. Chairman.

We have recognized the need for the existing barge line fuel tax and cost-sharing provisions to fund urgently needed projects such as Gallipolis, now the Robert C. Byrd Locks and Dam, Grays Landing, Point Marion, Winfield, Olmsted, lower Monongahela River locks and dams 2, 3, and 4, McAlpine, the Kentucky Lock addition, Marmet, and some additional projects in the Lower Monongahela River.

And we want to thank this committee for their terrific help last year in funding the study of the Kentucky Lock addition on the Tennessee River. The administration had provided no moneys for that. And with your leadership, and I know the leadership of Senator Sasser, funds were provided to keep that project going. And for that, we are most grateful.

I am here really today for two important reasons; first, to request continued Government investment consistent with a full Corps of Engineers capability for lock and dam modernization projects in the Ohio Valley.

BARGE FUEL TAX FOR O&M

Second, as is maybe inferred in my written testimony, I am here to urge the members of this committee to oppose the new administration's proposal to recover $460 million for operating and maintaining America's inland navigation system by imposing an additional tax of $1 per gallon on diesel fuel consumed by towboats operating on the system.

Besides putting a lot of barge companies out of business, economic dislocations brought on by high-level fuel taxes will considerably worsen regional economic inequities. In effect, inland navigation allows the economies of interior regions to compete with other regions at a more level playing field.

For instance, the coal in the West Virginia mountains has always been there, but without transportation this coal is valueless.

Transportation to market gives value to coal, ores, and raw materials. The less that transport to market costs, the more value it adds and vice versa.

This committee has longed been concerned with the economic health of the Ohio Valley by encouraging increased utilization of the region's and Nation's waterways. DINAMO has been pleased to work with you in order to assure there is no diminution of the industry base that supports the waterways system.

The effect of the reverse investment $1 per gallon tax will lead to a downward spiral of traffic on our waterways. A downward spiral of traffic will create a requirement of an even higher fuel tax which, in turn, will lead to less traffic.

Some tributaries will close, then others, and then in a relatively short time, the major export from America's river valleys will be neither crops nor coal, but people.

We have attached, Mr. Chairman, a qualitative assessment of the $1 per gallon barge fuel tax proposal, developed by PNC Bank, which is our largest bank in Pittsburgh, by senior vice president and chief economist Stuart Hoffman.

Also, I will be happy, in a couple of days, to make available another study that we have helped fund, looking at the effects of the proposed barge fuel tax on the Ohio River Valley coal.

This study was done by Mercer Management Consulting and National Economic Research Associates. And just to highlight a couple of the thoughts that are in this report and that will be released shortly——

Senator JOHNSTON. We will—if you will send that to us, we will put it in the record.

Mr. PALMER. OK, sir. We thank you very much for your support throughout and over the last, the number of years, last decade and beyond, for our projects. We appreciate your leadership and your cooperation and are delighted to work with you. And thank you very much, sir.

Senator JOHNSTON. Thank you very much, Mr. Palmer.

Mr. PALMER. Thank you.

[The statement follows:]

STATEMENT OF R. BARRY PALMER

Mr. Chairman and members of the subcommittee, I am R. Barry Palmer, Executive Director of DINAMO, the Association for the Development of Inland Navigation in America's Ohio Valley. DINAMO is a coalition of leaders from business, industry, labor, state and local government throughout the Ohio River Basin dedicated to the advancement of urgently needed modernization of navigation works on the Ohio River System. DINAMO was launched by the governors of Pennsylvania, Ohio, West Virginia and Kentucky in 1981. The states of Indiana and Illinois are also represented on our Board of Directors and Executive Committee.

A new Administration in Washington seeking to inspire a Nation to think in terms of investing—investing in people, investing in infrastructure, investing in the future, investing in America—would do well to see inland waterways as both the model and the methodology for what works. All Federal navigation investments are subject to a rigorous cost-benefit analysis in which public benefits must exceed the public costs. It's all there in black, not red ink, fox anyone to see.

DINAMO has and will always be supportive of lock and dam modernization objectives in the Ohio Valley where the benefits of the government investment are greater than the costs. But it has taken a dynamic partnership to move this nation forward in the 1980's and 1990's on waterways development, Mr. Chairman. We have recognized the need for the existing barge line fuel tax and cost-sharing provisions to fund projects such as Gallipolis, Grays Landing, Point Marion, Winfield, Olmsted, Lower Monongahela River Locks and Dams 2, 3 and 4, McAlpine, Kentucky Lock Addition, Marmet, Uniontown, Newburgh, Cannelton, Emsworth, Dashields, and Montgomery Locks and Dams. They are all projects worthy of investment by the very cost/benefit principles and guidelines developed by the US Army Corps of Engineers, pursuant to guidance from the Congress.

I am here before this distinguished subcommittee today for two important reasons: first, to request continued government investment consistent with full Corps of Engineers capability for lock and dam modernization projects in the Ohio Valley. As a backdrop to this request I add a note of caution: the proposal to tax barge lines for operation and maintenance has cast a cloud over the entire inland water transportation industry. The leaders of this industry believe that much of the need for modernization becomes moot if the proposed tax, which I will discuss later, becomes a reality. Lock and dam modernization objectives are essential economic development goals for a region receiving the values of low-cost water transportation, low-cost electricity, abundant industrial and municipal water supply, expansive recreational boating and fishing, in an environmentally qualitative setting. Inland waterway investment strategies involve communities and governments and the private sector as partners in their own destinies. The navigation system is the product of a joint venture in which the Federal government is just one of the parties which makes it possible. Other partners in this joint venture build and maintain the ports and terminals, elevators, storage facilities, access roads, and the manufacturing, refining and other plants that provide jobs. None of these partners—including the Federal government—could have done it alone.

Secondly, as previously inferred, I am here to urge the members of this committee to oppose the new Administration's proposal to recover $460 million for operating and maintaining America's inland navigation system by imposing an additional tax of $1 per gallon on diesel fuel consumed by towboats operating on the system. In all, if the $1 tax is imposed on top of present fuel taxes and a new BTU tax, Federal fuel taxes totalling $1.30 a gallon by 1997 will raise fuel taxes by a staggering 665 percent, increase carrier costs by approximately 250 percent, and hike freight rates by 40 to 50 percent. Because waterways move such large volumes of fuels, raw materials and farm crops which sustain American industry and agriculture, high-level increases in barge costs will reverberate throughout the U.S. economy. In an already weakened economy, some water-dependent industries will face cutbacks; with grain and coal exports, employment and interior regions directly affected, the U.S. economy will surely suffer.

Besides putting a lot of barge companies out of business, economic dislocations brought on by high-level fuel taxes will considerably worsen regional economic inequities. In effect, inland navigation allows the economies of interior regions to compete with other regions on a more level playing field. For instance, the coal in the West Virginia mountains has always been there. But without transportation this coal is valueless. Transportation to market gives value to coal, ores, and raw materials. The less that transport to market costs, the more value it adds—and vice versa.

A fuel tax of the proposed magnitude will be a heavy jolt to basic industry and agriculture that depend on barges to move massive quantities of raw materials, farm crops and fuels. Barges transport one-half the Nation's export grain, 30 percent of the petroleum and petroleum products, and a quarter of the coal for domestic electric utilities and export. But the real value of waterway transport cannot be related in tonnages alone. Commerce, like water, flows along the lines of least resistance. Production and industry have gravitated to the areas, and along the routes, of lowest costs. The industrial and agricultural development that has occurred along the inland waterway system of interior America has benefited this Nation beyond measure.

In a recent report by the Institute of Water Resources, "The 1992 Inland Waterway Review," one summary of a rate analysis table indicated that the average relative net rate savings of water transportation (per ton) was $8.61. This data means for every ton of a commodity moving on our nation's waterways the next alternative cost of moving that ton was $8.61 higher. With 522,417,000 tons of commodities moving on our nation's currently fuel taxed waterways in 1990, the nation received benefits (transportation savings) of nearly $4.5 billion. These are the kind of benefits that are flowing through, not being retained by, the carriers to the public, the true beneficiaries of the waterways system.

For generations, the major export from America's river valleys was neither crops nor coal, but people. Often spurred on by inland waterway access to raw materials and growing markets, the economic development of our river valley economies since World War II has changed that equation. Even the Congressional Budget Office, which has criticized Federal water resources investments in the past, concedes that inland navigation promotes regional economic development and that Federal disinvestment in the form of cost-recovery fuel tax will result in lower incomes. Moreover, the CBO is off base in asserting that inland water transport is the most heavily subsidized form of commercial freight transportation. By measuring Federal inland waterways expenditures as a percentage of the freight bill, rather than in terms of total Federal investment for each of the transport modes or in subsidy per ton-mile, the CBO computation is skewed against low-cost transport. If barge rates were higher, the CBO computation would show that the subsidy was lower. Nonetheless, the low rates for inland water freight are proof that the savings in transportation costs afforded by Federal investments are being passed on to shipper, receivers and consumers.

The Clinton Administration should be and this committee has long been concerned with the economic health of the Ohio Valley by encouraging increased utilization of the region/nation's waterways. DINAMO has been pleased to work with you, in order to assure there is no diminution of the industry base that supports the waterways system. As you understand, the effect of this reverse investment $1 per gallon tax will lead to a downward spiral of traffic on our waterways. A downward spiral of traffic will create a requirement of an even higher fuel tax, which in turn will lead to less traffic. Some tributaries will close, then others, and then in a relatively short time, the major export from America's river valleys will be neither crops nor coal, but people.

Attached is a "Qualitative Assessment of the $1.00/Gallon Barge Fuel Tax Proposal" developed by PNC Bank Senior Vice President and Chief Economist Stuart Hoffman.

We thank the distinguished chairman, ranking member, and members of this committee for their support, and ask for their continued support for investment in economically sound waterways projects and waterways issues in the future. We ask that we might make specific additions to this testimony after the budget has been presented to the Congress on April 5, 1993. Thank you for your attention to this matter.

QUALITATIVE ASSESSMENT OF THE $1.00/GALLON BARGE FUEL TAX PROPOSAL

President Clinton's budget document includes a proposal to raise the barge fuel tax by $1.00/gallon by 1997 to fund operation and maintenance costs of the inland waterways system. This user tax is in addition to the current fuel tax of $0.17/gallon scheduled to rise to $0.20/gallon in 1995 which is used to fund half of the system's construction and rehabilitation costs. In addition, the proposed BTU tax is estimated to add $0.09/gallon to the barge fuel tax once it is fully implemented. All together, these proposals, if enacted, would raise the barge fuel tax from the current $0.17/gallon to $1.29/gallon in 1997—a more than sevenfold increase. This alone could raise waterways fuel costs from the present $0.77/gallon to $1.89/gallon in 1997—a huge 245 percent increase in four years.

To gain a better understanding of this issue, I spoke with a cross section of waterways users, including representatives of the barge, coal, utility, chemical and steel industries and the farm sector (see attached list). From these conversations, it is readily apparent that the extraordinarily sharp hike in the barge fuel tax would have direct adverse consequences for many of these companies' shareholders and employees and indirect adverse impacts on many Ohio River Valley communities.

The most significant comments from this diverse group of waterways users are summarized below:

—President Clinton's budget plan is designed to reduce the Federal budget deficit, increase job opportunities and better allocate resources to "invest" in American infrastructure. It appears to us that the $1.00/gallon barge fuel tax proposal is at odds with all three of these goals. The estimated $460 million of tax revenue would not be realized since barge transportation volumes would drop sharply. The job loss in the barge industry and associated users such as coal, chemical and steel industries and farm products would add to Federal Government unemployment compensation costs and farm subsidy payments. Corporate tax payments would decline along with lower profits in these industries. Together, these revenue losses and added Federal outlays could surpass the added revenues from the fuel tax itself. Finally, the fuel tax would cause diversion away from the more efficient inland waterways system to other transportation modes. In 1991, the inland waterways moved 13.2 percent of all intercity freight for about 2 percent of the total freight bill. To implement his goal of "investing" in America's economic future, the President should consider allocating additional Government resources to the waterways system which has an estimated $8.50 to $1.00 benefit/cost ratio.

—The commercial barge industry and its customers are not the only beneficiaries of the inland waterways system, but they are being asked to pay the total operation and maintenance costs. Some other beneficiaries include recreational boaters, utility companies, municipalities and industrial water users. The CBO acknowledges the presence of large "externalities" in maintaining the inland waterways system. The inland towing industry should not have to shoulder the entire cost burden of maintaining a system which ultimately benefits numerous other interests.

—The $460 million of Federal Government spending to operate and maintain America's inland waterways system may exceed the most efficient method of operation. The Clinton Administration could consider "privatizing" the operation and maintenance function and perhaps significantly reducing the associated costs for which the fuel tax is being raised to cover.

—The barge industry would not be able to raise their prices enough to fully pass along the fuel tax increase. Consequently, many barge companies, which already have a low rate of return, could be forced out of business. Increased joblessness and higher Federal Government unemployment payments would be the result. This would also hurt profits and jobs in the barge building industry and related suppliers.

—The extra $1.00/gallon fuel tax would significantly raise the cost of waterways transportation and cause diversion to rail and truck transportation for many commodities. This could result in higher rates for rail and truck carriers, which would raise prices for coal, chemicals, steel and farm products that final consumers ultimately pay for items made partly from these inputs. For example, a coking operation using barged coal would face a 25 to 30 percent increase in its transportation costs which would raise the price of coke, steel and the many finished products made from steel.

—Representatives of regional electric utility companies estimate that their higher coal transportation costs would raise electricity costs by 0.5 to 2.0 percent for large commercial customers, such as a steel plant or auto factory.

—Barges are an environmentally friendly mode of transportation. The transportation mode diversion to rail and trucks resulting from the fuel tax hike could lead to dramatic pollution increases and greater risks associated with moving certain cargoes, such as chemicals, through the heart of densely-populated areas.

—Representatives of the coal and chemical industries noted that their products are priced in a global marketplace. Currently, they can be competitive and have large and growing export markets. A sharp increase in transportation costs partly passed along to their international customers could sharply curtail their sales, production and employment levels. This could be harmful to exports of coal and food stuffs, especially to Mexico.

In conclusion, this position paper discusses the many shortcomings of the $1.00/gallon barge fuel tax in admittedly a qualitative manner. There are enough unintended adverse consequences that the costs of the proposal in the form of lost output, jobs and tax revenues could easily surpass the 'benefits" of the higher fuel tax. Accordingly, we are attempting to quantify the proposal's cost/benefit ratio using an input/output model.

CONTACT LIST

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Effects of Proposed Barge Fuel Tax on Ohio River Valley Coal

PREPARED BY MERCER MANAGEMENT CONSULTING, LEXINGTON, MA.; AND NATIONAL ECONOMIC RESEARCH ASSOCIATES, WHITE PLAINS, NY

SUMMARY

Mercer Management Consulting and National Economic Research Associates (NERA), two affiliated consulting firms with expertise, respectively, in barge transportation and in economic impact analysis, have made a preliminary assessment of the effects of the Administration's proposed $1.00 per gallon increase in the waterway user tax on the outlook for Appalachian-Midwest coal mined in the Ohio River Valley.

This preliminary analysis assumes that barge transportation has a significant cost advantage over rail transportation. Hence, due to the user tax, the delivered price of coal will rise in those regions relying on barge. The burden of the tax will therefore be borne by coal producers, barge owners and related industries as barge rates increase causing declines in coal production and barge shipments.

The principal findings are:

(1) The outlook for coal mined in Appalachia and the Midwest is likely to be depressed by the barge tax. By the year 2000, coal fields in West Virginia and Eastern Kentucky could lose 20 percent of the production for domestic utilities they would have had in the absence of the tax. Utilities in states such as Wisconsin, Illinois, and Missouri which burn Ohio River Valley coal will increasingly turn to mines in the Power River Basin in the far West.

(2) In addition to losses in coal production for domestic utilities, the barge export coal market could be significantly diminished due to the tax. Because of the intensely competitive nature of international coal markets, U.S. exporters will not be able to pass along fuel tax-driven price increases of as much as $4.00 per ton. The waterway tax could dry up much of the 15 million toil barge-delivered Gulf export coal market.

(3) The combined losses in the domestic and export markets for Appalachia-Midwest coal mean losses of thousands of jobs. Our analysis indicates that, by the year 2000, as many as 13,000 coal mining jobs could be extinguished by the barge tax. This represents one out of every four jobs in the coal fields of West Virginia and Eastern Kentucky.

(4) Lost coal mining jobs mean losses in related jobs in transportation, manufacturing, and retailing. There are approximately 20,000 jobs dependent on the 13,000 direct coal mining jobs. In total, there are some 33,000 jobs at risk in the Ohio River Valley due to the impact of the proposed barge tax on the coal industry.

(5) Lost coal exports also add to the U.S. foreign trade deficit. Assuming all average delivered price of $45 per ton, the 15-million ton barge-delivered Gulf export coal trade is worth $675 million annually to the U.S. balance of payments. This could be jeopardized due to the waterway tax.

STUDY APPROACH

Mercer Management and NERA used the following methodology in arriving at their estimates of the effects of the waterway tax 011 Ohio Valley coal:

(1) Develop estimates of domestic coal production and consumption using the NERA coal and electric utility planning model. This NERA model has been refined over a period of 15 years and has been used to assess the impacts of other tax and public policy issues, such as a carbon tax. The model forecasts coal production for 6 regions and utility coal demand for 16 regions.

(2) Estimate the impacts of the tax on domestic utility consumption in two steps. First, the NERA model was used to project coal production and consumption under the Clean Air Act Amendments and the proposed Btu tax. This is the base case for

analysis of the waterway fuel tax. Second, the $1.00 per gallon proposed tax on fuel used in barge transportation was added. The differences in production and consumption between the two steps measures the impacts of the proposed barge tax, and allows direct comparison of the results in terms of regional coal production and employment.

(3) Compute the projected changes in the Ohio River Valley coal industry due to the tax in terms of direct coal industry losses as well as losses in related employment using recognized regional multipliers.

(4) Separately assess the outlook for barge-delivered export coal based on the elasticity of demand for such coal and the expected increases in delivered prices for long-haul movements of coal from the Ohio Valley to the Gulf. Add such impacts to the domestic results.

Proposed Waterway User Fee		
Year	Tax ($ Per Gallon)	Projected Revenue ($ Million)
1994	.10	35
1995	.25	115
1996	.45	210
1997	1.00	460
		Total 820

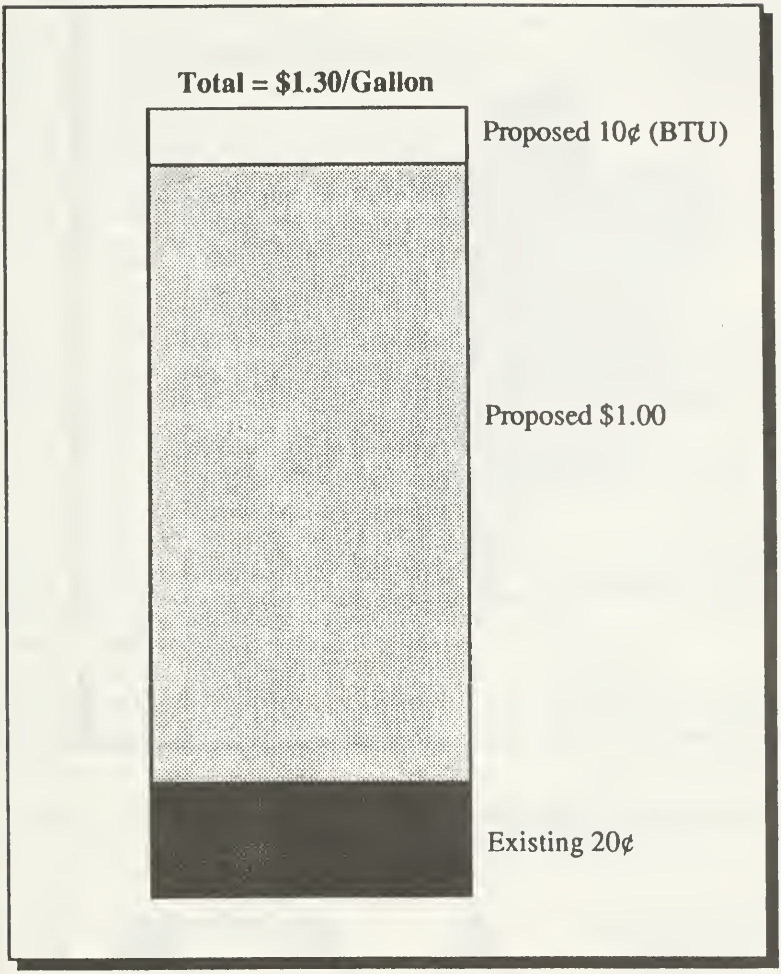
The tax

As part of the effort to curb the federal deficit, the Clinton Budget Proposal would exact a tax increase of more than 500 percent on diesel fuel used in barge transportation

To be phased in between 1994 and 1997, the tax is targeted to raise $820 million during that timeframe. This tax yield assumes that the U.S. Army Corps of Engineers' highly optimistic estimate of traffic diversion from the waterways due to the tax is correct

Other waterway fuel taxes

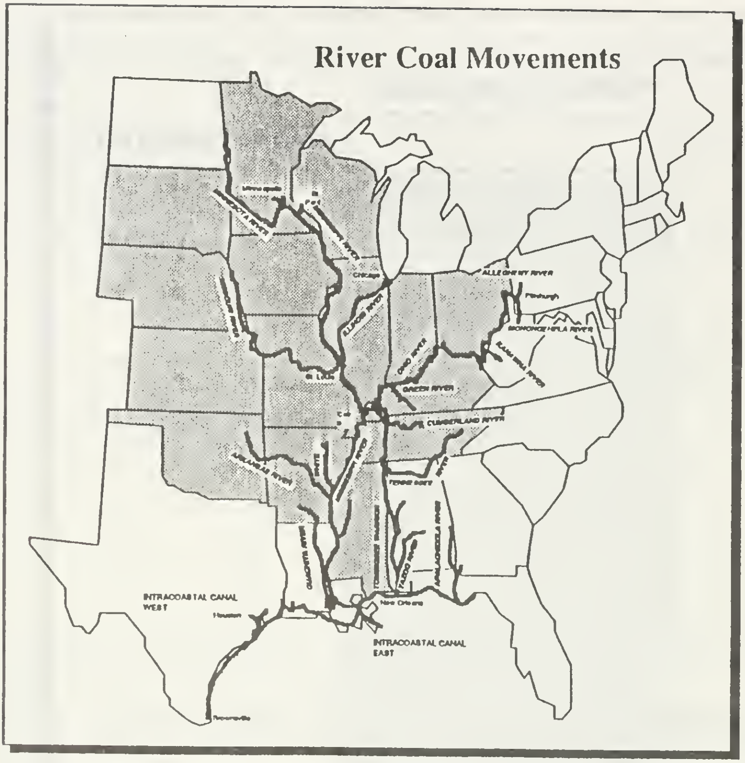
The proposed $1.00 per gallon tax on diesel fuel used in barge transportation would be levied in addition to two other fuel taxes on barge operations: An existing tax of 17 cents per gallon which will rise to 20 cents per gallon by 1995; and a proposed BTU tax of 10 cents per gallon.



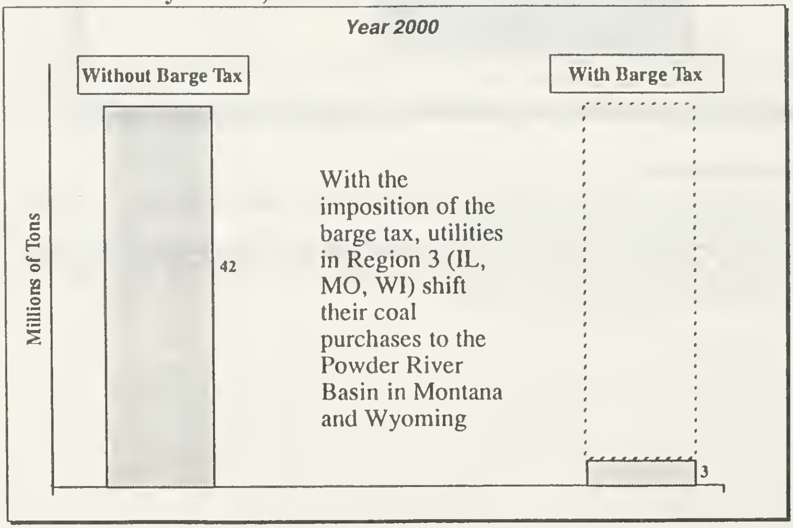
River coal movements

Coal that is low in sulfur and high in energy (btu) content originates at mines along the Ohio River and its tributaries.

This coal is delivered by barge to four principal areas of consumption: Utility Region 1 (IN, KY, WV, OH); Utility Region 3 (IL, MO, WI); Utility Region 8 (GA, FL, AL, TN, MS); and the Gulf export market.



Projected Consumption of Ohio River Valley Coal by Illinois, Missouri and Wisconsin Utilities



With the imposition of the barge tax, utilities in Region 3 (IL, MO, WI) shift their coal purchases to the Powder River Basin in Montana and Wyoming

The resourcing of Ohio Valley coal

Compared to coal from West Virginia and eastern Kentucky, Powder River Basin (PRB) coal from Montana and Wyoming is lower in Btu content—meaning that relatively more tonnage has to be burned (and transported) to achieve the same generating output compared with coal from the Ohio Valley.

Utilities in the Region 3 states of Illinois, Missouri and Wisconsin trade off coal sourcing decisions between Appalachian-Midwest coal and the Powder River Basin in terms of coal quality, minehead price and transport charges.

Forecasts in the year 2000 indicate that Region 3 utilities would take 22 million tons of Powder River Basin coal and 42 million tons of Ohio Valley coal in the absence of the waterway tax. Imposition of the $1.00 per gallon levy so reduces the competitiveness of Ohio Valley coal that Region 3 would shift 39 of its 42 million tons of Appalachian-Midwest coals to the PRB.

The waterway tax could devastate the gulf export coal trade

U.S. coal exports are extremely sensitive to price increases. U.S. producers face intense competition from producers in other countries such as Australia and South Africa. The U.S. is typically the high cost supplier for both steam coal for utilities and metallurgical coal for steel production. The principal U.S. advantages in the world coal market are the high quality of its coal and the reliability of U.S. production vis-a-vis coal labor problems in competing countries.

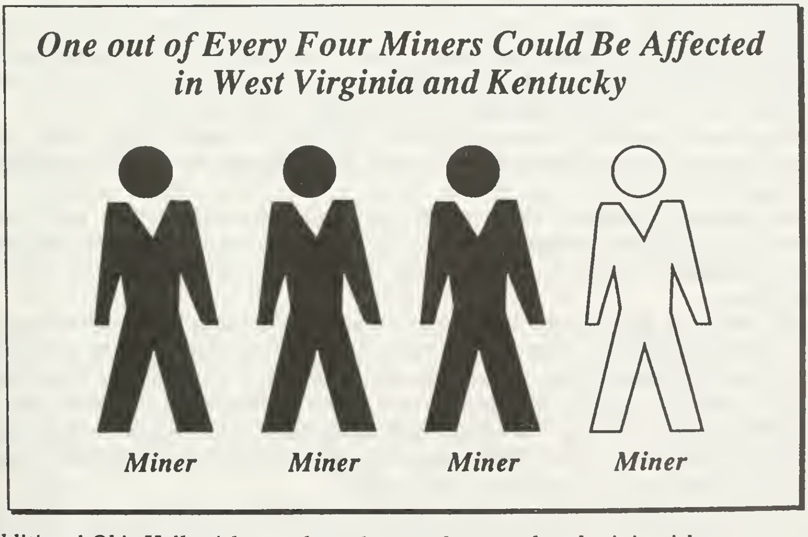
Based on U.S. Department of Energy projections, we have estimated the demand elasticity of U.S. steam coal exports to be as high as 7. This means that each 1 percent increase in the price of U.S. steam coal would result in a 7 percent decrease in demand by overseas purchasers.

The waterway fuel tax would increase the barge rate on export coal from the Ohio Valley to the Gulf by as much as $4 per ton. Such an increase would significantly drive up the delivered price of U.S. coal—now in the $40+ range. Faced with such a major boost, foreign buyers—already fickle toward the U.S. in their purchasing habits—will turn to foreign coal sources.

Result: A large portion of the barge coal export trade could be lost.

The Ohio Valley could lose thousands of jobs due to the waterway tax

Our analysis shows that the loss of domestic and export coal business due to the waterway user tax could cost the mining industry in the Ohio Valley 13,000 jobs by the year 2000.



One out of Every Four Miners Could Be Affected in West Virginia and Kentucky

Additional Ohio Valley jobs are dependent on threatened coal mining jobs

Economic studies show that for every two coal mining jobs in the Ohio Valley, there are three other jobs in related activities such as transportation, manufacturing and retailing. Loss of 13,000 coal mining jobs would render unemployed another 20,000 Ohio Valley workers.

UPPER MISSISSIPPI AND ILLINOIS RIVERS NAVIGATION STUDY

STATEMENT OF CHRISTOPHER J. BRESCIA, PRESIDENT, MIDWEST AREA RIVER COALITION 2000

Senator JOHNSTON. Next, we will hear from the Midwest Area River Coalition 2000 with Mr. Christopher J. Brescia, who is president, to speak on the upper Mississippi and Illinois River Waterway study.

Mr. BRESCIA. Mr. Chairman, thank you very much.

I am Chris Brescia, president of the Midwest Area River Coalition 2000. We thank you for this opportunity to appear before you today.

Although the President's budget proposal for fiscal year 1994 has not been released, our testimony today expresses full support for the anticipated full-capacity appropriation recommendation for a navigation feasibility study for the upper Mississippi River and the Illinois Waterway.

Mr. Chairman, our members currently generate over $90 billion in economic activity from the Midwest and conservatively employ more than 142,000 people in 20 States.

We represent a cross-section of our region's interests from Minnesota to Louisiana. We are farm cooperatives, grain producers, processors, shippers, terminal operators, towboat operators, construction companies, port authorities, to name just a few.

As an organization, we have as our primary objective the need to address the capacity concerns of the upper Mississippi River system as they affect the future reliability of economic activity from the region. At the same time, we also understand that this agency must take into account consideration of environmental impacts.

Our name is derived from a clear recognition that by the year 2000 the traffic delays on the upper Mississippi are projected to reach significant proportions—delays that could translate into costs as high as 8 cents per bushel of corn shipped for export.

We were created to encourage the timely review of the river infrastructure of the upper Mississippi and Illinois to avoid crippling up region's economy.

We strongly believe that our continued competitiveness and success is significantly dependent on the manner in which the Federal Government chooses to address inland waterway infrastructure in the future.

We believe that it is important to move forward with addressing capacity limitation concerns. However, we also concur that a series of environmental studies need to be performed that cause this feasibility study to take 6 years rather than a shorter period of time.

With this in mind, we must not forget that the upper Midwest is the largest source of U.S. export grain to the world market and that the gulf is our outlet to the world.

If this condition is to remain, grain must be competitively and reliably available to world market customers. A cost-effective waterway system has allowed for this condition to develop.

The waterway system is also an efficient conduit for domestically consumed building products, agricultural chemicals, fertilizer, and coal.

The system operates through a series of locks and dams, many of them grouped in series in our region. They are old and need to be modernized, especially at certain bottlenecks.

If this is not done, Mr. Chairman, the powerful influence that the waterway creates in providing regional competitiveness evaporates. The result would be reduced farm prices and income, reduced investment in the region, reduced secondary and tertiary employment and economic activity, thousands of jobs jeopardized by loss of traffic volume, increased Government expenditures to support grain prices, and decreased Government tax revenues, to name a few. We hope to avoid this situation.

BARGE FUEL TAX INCREASE

However, Mr. Chairman, I would be remiss if we did not comment on the President's proposal to impose a $1 a gallon user fee in inland transportation.

This proposal would put the economic and environmental future of our region at considerable risk. And I know that you understand this as you expressed earlier this afternoon.

Our members estimate a 40-percent traffic diversion of grain shipments due to the transportation increases if this tax is imposed. In addition, because world markets of grain rotate on pennies per bushel, the U.S. farmer will have to absorb this price increase of most of our export sales to remain competitive.

Diverted traffic will move via other modes that have been evaluated to cause a greater impact on our environment. This proposal for $1 a gallon increase also calls into question the long-held bipartisan policy of regional economic development and world competitiveness that has led to over $10 billion invested over the last 25 years on the inland waterway system.

It also seriously threatens the estimated $22 billion on private investment in the marine equipment and terminals, rail and road feeder systems built to support the most cost-effective and least environmentally intrusive means of transportation.

Mr. Chairman, in closing, I would simply like to point out that last year the Congressional Budget Office released a report that included a review of this $1 a gallon proposal.

The authors concluded that raising the fuel tax ". . . would undermine efficiency if the tax rate exceeded the marginal cost to the Government. Analysis based on limited data available suggests that the present tax rate reflects marginal cost."

At a much higher rate, tow operators would face a price greater than the marginal cost and would, thereby, be discouraged from making trips. That yields reduced traffic on the waterway system.

Ironically, Mr. Chairman, we believe that this confiscatory tax will create the same dampening economic conditions we described earlier that would result from inattention to the infrastructure needs.

We applaud the action taken by the Senate a couple of weeks ago expressing their opposition to this provision. And thank you, Mr. Chairman, for your leadership in that regard.

Mr. Chairman, as a new organization focusing on the needs of the upper Mississippi and the Illinois River systems, we look forward to working with you and this committee in the future.

Thank you for this opportunity.

Senator JOHNSTON. Thank you, Mr. Brescia.

[The statement follows:]

STATEMENT OF CHRISTOPHER J. BRESCIA

Mr. Chairman and Distinguished Members of the Subcommittee, I am Christopher Brescia, President of the Midwest Area River Coalition 2000 (MARC 2000), based in St. Louis, Missouri. Thank you for the opportunity to appear before you today to express our views on certain portions of the U.S. Army Corps of Engineers' program for fiscal year 1994.

Although the President's budget proposal for fiscal year 1994 has not been released, our testimony today expresses full support for the anticipated appropriation recommendation for a navigation feasibility study for the Upper Mississippi River and Illinois Waterway. In addition, we would like to make a few supporting comments for the Environmental Management Program (EMP).

This is the first time that MARC 2000 has presented testimony on Capitol Hill. We are a relatively new organization officially opening our doors in August 1992. Our current members generate over $90 Billion in economic activity from the Midwest and conservatively employ more than 142,000 in 20 states. We represent a cross-section of our region's interests from Minnesota to Louisiana. We are farm cooperatives, grain producers, processors, shippers, terminal operators, towboat operators, construction companies, port authorities, to name a few of the principal areas of economic activity.

As an organization, we have as our primary objective the need to address the capacity concerns of the river system as they affect the future reliability of economic activity from the region. At the same time, we also understand that this agenda must take into consideration environmental impacts.

Our name is derived from a clear recognition that by the year 2000 the traffic delays on the Upper Mississippi are projected to reach significant proportions—delays that could translate into costs as high as $.08 cents per bushel of corn shipped for export. We were created to encourage a timely review of the river infrastructure so as to avoid crippling our region's economy. We strongly believe that our continued competitiveness and success is significantly dependent on the manner in which the Federal government chooses to address inland waterway infrastructure in the future.

In that respect, Mr. Chairman, we strongly urge you to support the Administration's request to address the critical navigation and environmental investment priorities of our region for the next 50 years. We support the full funding of the Upper Mississippi River and Illinois Waterway feasibility study as proposed by the U.S. Army Corps of Engineers.

MARC 2000 does not make this statement lightly. Over the last nine months, we have worked closely with the Corps of Engineers to reach this position. On December 9, 1992 at the RRC held in Chicago, Illinois, we were critical of the proposed plan at that time. Today, we can say that the amended plan provides an acceptable framework for meeting our concerns and through which we can advocate for additional fine tuning over the six-year proposed time period.

We believe that it is important to move forward with addressing capacity limitation concerns as quickly as possible. However, we also concur that a series of environmental studies need to be performed that cause this activity to take six years rather than a shorter period of time.

With this in mind, we must not forget that the upper Midwest is the largest source of U.S. export grain to the world market. If this condition is to remain, grain must be competitively and reliably available to world-market customers. A cost-effective waterway system has allowed for this condition to develop. The waterway system is also an efficient conduit for domestically consumed building products, agricultural chemicals, fertilizer and coal, to name a few.

This waterway system operates through a series of locks and dams, many grouped in series, that are old and need replacement especially at certain critical bottlenecks. Corps of Engineers (COE) traffic projections place critical portions of this system at full capacity by the year 2000, resulting in significant delay costs and traffic movement off the river system for certain commodities. Others may not even move by any alternative mode under certain projected economic conditions.

With this development, the powerful influence that the waterway creates in providing regional competitiveness evaporates. The result—reduced farm prices and income, reduced investment in the region, reduced secondary and tertiary employment and economic activity, thousands of jobs jeopardized by loss of traffic volume, increased government expenditures to support grain prices and decreased government tax revenues, to name just a few. We hope to avoid this situation.

In addition to evaluating the economic feasibility for future capacity needs this proposed plan will conduct a series of environmental studies over the next four to six years that will provide us with the tools necessary to further evaluate the impact of increased navigation on the Upper Mississippi River and Illinois Waterway. We support this initiative and the Corps' attempt to satisfy all the constituencies in this regard.

Yet Mr. Chairman, there appears to be a nagging concern expressed from state representatives and environmental groups for closure on the "Plan of Study." This document was forwarded through the Corps of Engineers to Washington over two years ago. It enumerated a series of environmental studies that could be performed to help expand the basis for which mitigation for increased navigation on the river system could be evaluated. The feasibility study, which we support, does not include all the originally recommended studies, but it has made great strides in achieving economies and recognizing priorities.

Bringing closure to this issue is important for any partnering relationship to evolve during the feasibility phase of the navigation study. Many people spent over two years developing that document and have not had the courtesy of a formal response. Otherwise, the Corps' credibility in the region will remain tenuous until this issue is put behind us, or we will lose a valuable opportunity for a future balanced approach to the river.

We support the continued funding of the Upper Mississippi River System Environmental Management Program (EMP). This program has brought together traditionally competing interests into partnership for a better understanding of our river system. The ongoing and completed construction activities at over 18 habitat projects, to date, are substantially benefiting the river ecosystem by rehabilitating and enhancing backwater lakes and side channels in those areas. The monitoring, data analysis, and ecological research activities being implemented in the Longer Term Resource Monitoring (LTRM) component are proving to be beneficial to both Federal and State river resource managers. In fact, we note that many of the products of the LTRM are complementary to the Upper Mississippi navigation study. We join other groups in expressing our hope that full funding for this program will continue in fiscal year 1994.

MARC 2000 supports an environmentally-sustainable agenda for our region. We have left the door open to all interested parties to enter into a dialogue. Some environmental advocates have engaged us on a range of issues from navigation impacts to a plan for a holistic environmental management plan for the river system. Some of these issues will be appropriately evaluated within the confines of a navigation study. Others may require independent attention. We will, however, continue to work towards a consensus position.

Mr. Chairman, we would be remiss if we did not comment on the President's proposal to impose a $1 per gallon user fee on inland transportation. This proposal would put the economic and environmental future of our region at considerable risk. It also calls into question the long-held bipartisan policy that led to over $10 Billion invested over the last 25 years on the inland waterway system. It also seriously threatens the estimated $22 Billion in private investment in equipment, terminals, rail and road feeder systems built to support the most cost-effective and least environmentally intrusive means of transporting bulk commodities to world market clients and to domestic customers.

Ironically, Mr. Chairman, we believe that this confiscatory tax will create the same dampening economic conditions we described earlier that would result from inattention to the infrastructure needs. We applaud the action taken by the Senate a couple weeks ago expressing their opposition to this provision.

Thank you for the opportunity to present our views.

COOSA-ALABAMA RIVER NAVIGATION IMPROVEMENTS

STATEMENT OF RALPH CLEMENS, JR., EXECUTIVE VICE PRESIDENT, COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION

Senator JOHNSTON. Next, we will hear from the Coosa-Alabama River Improvement Association, Ralph Clemens, Jr., executive vice president

Mr. CLEMENS. Good afternoon, Mr. Chairman. Thank you very much for hearing us.

I have with me the president of our association, Mr. Tom McKenzie from Gadsden, AL. He will present you with the bulk of our presentation.

ENDANGERED SPECIES ISSUES

What I would like to do is to comment on one point, if I may. In the year 1973, a group of individuals got together and in a very sincere and well-meaning way voted to establish the Endangered Species Act.

That particular effort has in the recent past, at least in my view, degenerated into a vehicle for certain frustrated bureaucrats to use as a club to hammer home their own parochial views on how the state of the world, in particular the state of the Alabama River, the Tombigbee River, Cahaba River, et cetera, should be.

My little daughter talked to me the other night and said, "Daddy, aren't we God's creatures, too?"

And I said, "Yes, as a matter of fact, we are."

This is a genuine dispute between people who believe they are right. The point I would make though, Senator, is that Secretary Babbitt is now placed in a very unenviable position of not only being a new person on the block, if I may, but is also receiving, in my view, less than accurate information from those people who would serve him best by giving him that accurate information.

I am speaking now precisely of the Alabama sturgeon issue. I feel certain from the reaction on the diose that you have heard of it, and you are probably well familiar with it.

So I will not go into a lot more detail, except to say that when reasonable people get together and present reasonable cases, pro and con, on a subject, that is one thing. But when the bureaucracy hammers home an issue with such relentless effort, that becomes frightening, at least to me.

I do not think that that is what government is all about, quite frankly. I will leave those comments with you. I speak for a number of people in central, northwest—correction, northeast and southwest Alabama. And they concur totally with what I say.

I will now turn it over to our president.

STATEMENT OF J.T. MCKENZIE, PRESIDENT, COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION

Mr. McKENZIE. Mr. Chairman, we appreciate the opportunity to add our verbal testimony to the written report and testimony that we have already turned in, which is in much more detail.

THREE AREAS OF CONCERN

We will just simply summarize our statement or highlight the three areas of concern to the association. First, the funding request for the Coosa-Alabama Rivers and ancillary projects within the basins; the threat posed by the President's cost recovery plan, that $1 per gallon fuel tax, which has already been mentioned earlier, which would cover O&M costs, but would certainly cripple the waterway use and decimate small tributary activities; and as Ralph just mentioned, the incredible attempts by the Fish and Wildlife Service bureaucrats to completely dismantle substantial segments of Alabama's river systems.

I think it is enough to say that they need to have the word "economic" in that law somewhere. And it is not in there so far.

COOSA RIVER NAVIGATION PROJECT

An additional major issue, Mr. Chairman, and one of our major objectives is the completion of the Coosa River navigation project. Each of us here knows the history of the attempt to establish the navigation channel connecting Montgomery, Gadsden, and Rome, GA.

So I will not review that history. However, the current emphasis on infrastructure investment and the creation as rapidly as possible of jobs throughout the country, it occurs to us that a project of this proportion would be essential to the administration's stated objectives.

Remember, if you will, that the predesign engineering surveys for the project are complete. In other words, one of the most time-consuming activities are already on the shelf at the Corps of Engineers.

With the proper initial funding, the project could be undertaken in a relatively short time. The estimates for completion of the project vary somewhat, but perhaps 7 years with employment potential of 12,000 workers could be expected.

Several advantages would accrue as a result of efforts to reestablish this project. First, this would be one of the largest and most rapid generators of jobs currently available.

Second, the Coosa River navigation project would re-energize a section of Alabama which is in the economic doldrums.

The President's contention that now is the time for inventory—infrastructure, excuse me, infrastructure investment would be supported. Alabama's waterway connection to its industrial market would then be complete.

This would do a lot for employment in an area that certainly had a high rate of employment for a lot of years. We would encourage that Congress take a hard look at this project.

Mr. Chairman, we appreciate your cooperation in the past and your interests in attending to our needs. And we look forward to working with you and answering any questions you might have about projects of our interest.

Thank you.

ALABAMA STURGEON

Senator JOHNSTON. Thank you very much, Mr. McKenzie. I notice in your statement you say they are still looking for the Alabama sturgeon.

Mr. CLEMENS. Yes, sir; since 1984.

Mr. MCKENZIE. They have not found any in some time.

Senator JOHNSTON. Well, do you mean it is more than endangered? It is gone.

Mr. MCKENZIE. Well, we think the only thing that is endangered now is the business and industries that are up and down that river.

Senator JOHNSTON. Yes.

Mr. McKENZIE. If they put it on the list, we will all be endangered.

Senator JOHNSTON. They really have not found any in all of that time.

Mr. CLEMENS. No, sir.

Mr. McKENZIE. No, sir.

Senator JOHNSTON. Not one has shown up since 1984?

Mr. McKENZIE. They are still looking.

Mr. CLEMENS. The Fish and Wildlife Service has contracted to the Department of Conservation in Alabama to have the region surveyed time and time again. They have still not come up with anything.

Senator JOHNSTON. And what do they want to do in the meantime?

Mr. CLEMENS. Well, that is essentially what would happen. I think a point to be made here, sir—and I will not belabor it, but the issue of the heelsplitter mussel on the Black Warrior was an issue that was talked about by the Fish and Wildlife people as a "Do not worry about it. Everything is going to be OK, even if we place it on the list."

Well, as it turns out, the aftermath of that proved that theory wrong, because we are going through all kinds of agony trying to get dredging done. And they are saying the same thing now with the sturgeon. "Do not worry about it. If we list the sturgeon, you will still be able to use the river. You will still be able to dredge it. You will still be able to use it as you have in the past."

And quite frankly, I do not believe that to be true.

DREDGING OPERATIONS JEOPARDIZED

Mr. McKENZIE. Our concern is that if they list the habitat, as they say it is going to be for that fish, to be part of the Alabama River, part of the Tenn-Tom, and part of the Cahaba River—all of which the Coosa flows into, of course—if they list that as a critical habitat, then the people that have to worry about this further down the line enforcing it may very well do just what Ralph just said, close down all dredging operations.

And if you close down the dredging operations, it is not but a few months until you do not have any transportation moving.

Senator JOHNSTON. This sturgeon does not exist anywhere but in Alabama, apparently?

Mr. CLEMENS. I would like to be able to answer that factually, but I would rather lean on somebody that was an ichthyologist and be able to tell you.

I would be hard pressed to—I am so confused by claim and counterclaim coming from Jackson, MS, sir, that I am having a difficult time absorbing the technical details of it. I cannot tell you if they live anywhere else.

Mr. McKENZIE. There are certainly other sturgeon. The question is whether this one is a separate variety and whether it still exists.

Senator JOHNSTON. It is just a regular sturgeon that used to live in Alabama. [Laughter.]

Mr. McKENZIE. Perhaps.

Mr. CLEMENS. One of the sturgeon.

Senator JOHNSTON. Sometimes we have to laugh at this issue, but it really is not very funny.

Mr. CLEMENS. No, sir.

Senator JOHNSTON. Thank you.

Mr. CLEMENS. Because if we do not laugh, we will cry.

Senator JOHNSTON. Well, thank you very much, gentlemen. We appreciate your testimony.

[The statements follow:]

STATEMENT OF J.T. MCKENZIE

Mr. Chairman and distinguished committee members, I am happy to have the opportunity to share with you our view of needed funding which should be included in the fiscal year 1994 energy and water development appropriations for each of the projects listed below, as well as remarks addressing issues which threaten the very existence of this Nation's inland waterway system.

The membership has authorized me to submit these comments in the hope that some measure of equity might be introduced during deliberations which speak to the support of our rivers.

THREE AREAS OF CONCERN

This statement will highlight three areas of concern to the association:

- —Funding requests for the Coosa-Alabama Rivers and ancillary projects within the basins.
- —The threat posed by the President's cost recovery plan ($1-per-gallon fuel tax) which would cover O&M costs of the shallow-draft inland navigation system but would cripple waterway use and decimate small tributary activities.
- —The incredible attempts by the Fish and Wildlife Service bureaucrats to completely dismantle substantial segments of Alabama's river systems.

Our funding requests for fiscal year 1994 are listed below. As you are aware, the association supports the waterway system that originates in northwest Georgia and flows diagonally across the State of Alabama to Mobile Harbor.

Project	*Association's budget request*
Alabama-Coosa River, AL[1] (Alabama River including Claiborne L&D)	$7,500,000
Miller's Ferry L&D[2]	3,000,000
Robert F. Henry L&D[2]	6,000,000
Mobile Harbor	19,000,000
Lake Allatoona, GA[2]	6,000,000
Carter's Lake, GA	3,500,000
Comprehensive study-ACT/ACF basins	3,000,000
Total	48,000,000

[1] Includes 72 miles from the mouth of the Alabama River through Claiborne L&D to Miller's Ferry. Coosa River not included. Also includes monies for training works construction, land acquisition and monitoring programs.

[2] The need to begin as well as complete various generator rewinding projects is reflected in each of these appropriation requests and are internal to the sums listed.

One of the association's major objectives, Mr. Chairman, is the completion of the Coosa River navigation project. Each of us here knows the history of the attempt to establish the navigation channel connecting Montgomery, Gadsden and Rome, Georgia, so I won't review that history.

However, with the current emphasis on infrastructure investment and the creation, as rapidly as possible, of jobs throughout the country, it occurs that a project of this proportion would be essential to the administration's stated objectives. Remember, if you will, that the pre-design engineering surveys for the project are complete. In other words, one of the most time-consuming activities are on the shelf with the Corps of Engineers. With the proper initial funding, the project could be undertaken in a relatively short time.

The estimates for completion of the project vary, but 7 years with employment potential of 12,000 workers would be in order.

In the past, the cost and alleged benefit-cost ratio shortfalls by the Corps have hampered discussion on completing the project. Now is the time to revisit the issue.

ADVANTAGES LISTED

Several advantages would accrue as a result of efforts to reestablish the project:

—This would be one of the largest and most rapid generators of jobs currently available.

—The Coosa River navigation project would energize a section of Alabama which is in the economic doldrums.

—The President's contention that now is the time for infrastructure investment would be supported.

—Alabama's waterway connection to it's industrial market would be complete.

Our membership reflects a broad range of backgrounds; each with a deep interest in waterway development. Some use the waterway now, either as shippers or towboat operators. Others are businessmen, bankers and a variety of other private individuals who have a stake in future economics for their firms and their successors to develop. We include many counties and municipalities which have vital interests in the course of river basin development. These members are working diligently to develop our waterway into a productive part of the river infrastructure of the State and the Nation.

Their efforts spring from a desire not only to improve the economic contribution of enhanced transportation available to users, but to provide a means of growth to benefit those who will follow in our footsteps.

These, then, are the people who are the driving forces behind the renewed interest in the Coosa River navigation project. They are also the same people who see the planned $1 per gallon fuel tax as one of the real threats to inland river navigation.

As one of the most efficient means of transporting large quantities of material throughout the country, the inland river barge industry has for years enabled numerous industries to survive and prosper because of the availability of very competitive rates. That industry is in the final stages of adjusting to the 20-cent per gallon fuel tax which was levied to cover one-half of inland navigation construction and rehabilitation. The proposed tax of $1 dollar as well as the BTU tax which is also in the works, would do more to scuttle America's barge industry than any natural disaster known to humankind.

NEGATIVE ASPECTS OF FUEL TAX

A recent trade newsletter indicated some important negative aspects of the fuel tax relative to the industry. They bear repeating:

—The fuel tax will substantially raise barge rates.

—Barge rate increases are difficult to pass on.

—Consumers would bear the direct impact of the fuel tax.

—The $1 fuel tax will have other "trickle down" effects.

—Exports could plummet as "trade taxes" escalate.

—Modal transportation shifts will have dire environmental aspects.

—O&M costs recovery could dismantle the waterways system.

—The Federal-private sector partnership would be ended.

—Multi-purpose water resource development would suffer.

The aforementioned points very eloquently speak to the dilemma facing the industry—the increasing tax structure levied on an industry which is desperately attempting to right itself after many years of disturbance will prohibit it from redeveloping and refurbishing it's own internal "infrastructure".

To say the least, the association rejects the premise for the need for a tax as found in "a vision of change for America". When one overlays the "vision" on the points describing the most severe disadvantages of the fuel tax, it becomes apparent that far more harm than good would come of the effort.

You have noticed, Mr. Chairman, that we have also requested continued funding for the comprehensive study of the Alabama/Coosa/Tallapoosa and Apalachicola/Chattahoochee/Flint River basins in the sum of 3 million dollars. This is money which is an investment in the truest sense. When completed, the three States involved, as well as the U.S. Army Corps of Engineers, will have a mechanism to develop a compact to address the use of water within the major portion of the Southeast part of the country.

You may recall that the association emphasized the notion of a regional compact in the early stages of this crucial issue in late 1989. We still support it's development.

At the beginning of this testimony Mr. Chairman, I spoke of three major concerns to the association's membership. I now close my presentation with the last issue to which I referred.

The Fish and Wildlife Service has again submitted papers to list the Alabama sturgeon to endangered status. This is the second time that the alleged species has been submitted to Washington. The initial submission was returned because of inadequacies in the content and the process. The second submission has changed very little and the sturgeon has still not been found! For anyone who has followed the saga of the spotted owl and the effects of its protection under the Endangered Species Act of 1973, the mindless determination of bureaucrats at the Jackson, Mississippi field office casts an ominous cloud over the legitimate concerns of Alabama people and industries along the affected basins. In spite of hollow protestations by the Service that no changes will take place in river operations, one need only to revisit the current status of the heelsplitter mussel to understand that any guarantees by the Fish and Wildlife people are without substance. Those who issued assurances that "no change will take place in river operations" are evidently now altering their position.

When an entire river system is closed down, including towing, dredging and manufacturing operations which provide support to thousands of families, there comes a time to critically reexamine the law which eliminates the potential for economic development which has taken years of work and billions of dollars of investment to nurture.

I depart from our traditional comments to implore you and your colleagues to review the Endangered Species Act of 1973 and provide amending provisions to the "all or nothing at all" aspects of this law. As one of your colleagues in the Senate was recently quoted as saying, "We have indeed created a Frankenstein".

In closing, we request your support in resolving the following concerns:

—Reopen the issue of the Coosa navigation project.

—Exercise extreme awareness of activities by the Fish and Wildlife Service which pose the most significant threat to the State of Alabama in many years.

—Look sternly at the attempt to impose additional fuel taxes on the inland river navigation industry.

—Continue funding the tri-State comprehensive study.

—Continue O&M funding for the Coosa-Alabama basins as well as Mobile Harbor.

We deeply appreciate the opportunity to speak before the subcommittee. Please accept our sincere appreciation for your support. Your attentiveness and concern in the past continues to give hope to those who have the vision to plan for the future. Thank you and good luck.

COOSA-ALABAMA RIVER IMPROVEMENT ASSOCIATION'S DELEGATION

J.T. "Tom" McKenzie, Pres., C.A.R.I.A., Gadsden, AL
Ralph O. Clemens, Jr., Exec. VP, C.A.R.I.A,, Montgomery, AL
Walter B. Stevenson, Jr., State of Alabama, ADECA, Montgomery, AL
Mayor Sue Glidewell, Rainbow City, AL
Mayor Alma S. Leak, Wetumpka, AL
Judge Otha Lee Biggs, Monroe County, Monroeville, AL
Judge Jasper Fielding, Coosa County, Rockford, AL
John P. Carey, Alabama State Docks, Mobile, AL
Phillip Sanguinetti, President, The Anniston Star, Anniston, AL
John P. McCarron, Pres. & CEO, Ryan-Walsh, Inc., Mobile, AL
Joseph R. Benson, M.D., City Councilman, Wetumpka, AL
Velma N. Gober, City Clerk, Wetumpka, AL
Robin P. Head, Administrative Asst., C.A.R.I.A., Montgomery, AL
Charlotte McKenzie, Gadsden, AL
Ada W. Paravicini, Elmore, AL
Peggy Benson, Wetumpka, AL
Lynn King, Gadsden, AL
Conrad Fowler, Lanett, AL
Bill Satterfield, Balch & Bingham, Birmingham, AL
Pat Dozier, Montgomery Marina, Montgomery, AL.

STATEMENT OF THE ANNISTON (AL) STAR

Dear Senator Johnston, although Anniston is not on the Coosa River per se, we have always felt that the river development would be a great asset to the county, the state and the nation.

Our newspaper has supported this activity for more than 50 years and I hope you will consider this letter as written support for the Coosa-Alabama River Improvement Association, Inc., request for fiscal year 1994.

We urge the Congress to resume design and engineering work on the Coosa Project, which was suspended in 1983, and make the Alabama River usable year-round by investing in a fourth dam in the area south of Claiborne. We feel increased user fees and taxes tend to stifle all businesses associated with waterway activities; current plans call for fuel taxes to rise to $1.20. The user fees and taxes should be discarded or substantially reduced as revenue generators.

We also urge that timely and complete dredging and appropriate maintenance for the Alabama River Channel be continued, as well as the operation and maintenance of the upstream reservoirs and hydropower plants at Allatoona and Carters Lake in Georgia.

Extensive commitments to private investment on navigable waterways have been made on the assumption that Federal maintenance and operations of the waterways would be continued. Congress must use every means to fund the remaining term of the study by the Corps of Engineers and Alabama/Georgia/Florida to resolve the two-basis water dispute in the region. Studies of completed waterways, such as the Arkansas River and the Gulf Intracoastal Waterway, show that the returns fully justify the investment.

We would greatly appreciate your assistance in these matters.

STATEMENT OF THE DRAVO BASIC MATERIALS CO., INC.

Dear Congressman Johnston:

I am writing in support of the Coosa-Alabama River Improvement Associations funding request for fiscal year 1994 and I am testifying as part of a regional effort to improve and extend that waterway.

Our company dredges sand and gravel from the Alabama River and moves this product to market by barge on the river. We expect to move over 1,000,000 tons in fiscal year 1994. The continual upgrading and maintenance of this system is vital to us and other users to achieve the lowest transportation costs possible.

ONGOING DISPUTE AMONG STATES

I am sure you are aware of an ongoing dispute between Alabama, Georgia, and Florida concerning the use of water from the Coosa and Chattahoochee River basins. We believe it is very important for congress to fund the remainder of the study by the Corps of Engineers to resolve this problem.

We understand that there is a possibility that the Fish and Wildlife Service through the Department of the Interior will list the Alabama Sturgeon as an endangered species on the Alabama River and other Alabama waterways. If this is done, it will effectively shut down these rivers to commercial traffic and halt all commercial sand and gravel dredging. Congress should require the consideration of economics in any decision to list a species as endangered. Furthermore, mandatory designation of a critical habitat area prior to the species being listed would better serve the interest of both business and environmental concerns.

Thank you for your consideration.

INVALUABLE LINKS TO PORT OF MOBILE

The Coosa-Alabama River System along with the other waterways of the State of Alabama are invaluable links to a successful Port of Mobile. Dravo Basic Materials Company, Inc. fully supports the testimony of the Coosa-Alabama River Improvement Association and joins the efforts of its membership to maintain and extend the waterway to make the benefits of low cost, energy efficient water transportation available to a broader economic base.

Dravo Basic Materials Company, Inc. is one of the leading producers of construction raw materials and aggregates on the Gulf Coast. We rely extensively on the waterways of Alabama, Florida, Louisiana, Mississippi and Texas for production and delivery of our products. In 1992 we produced and moved via Alabama waterways over 1,000,000 tons of sand and gravel. We also transported over 700,000 tons of limestone as well as significant quantities of other products.

Our projections for 1993 are:

	Tons
Sand and Gravel	1,300,000
Other	700,000

Dravo Basic Materials Company, Inc. operates a fleet of 23 boats, 85 barges and 7 dredges. We maintain a large terminal and handling facility on McDuffie Island in Mobile, Alabama in addition to numerous support facilities throughout South Alabama and the Gulf Coast.

The maintenance of our waterway system is essential for the efficient, orderly production and delivery of materials. Efficient transportation productivity lowers inflation and tends to ease upward pressure on the deficit. In order to provide this capability, it is imperative that the Corps of Engineers be provided with the appropriations necessary to continue the maintenance and development of the waterway system, including continued work on training dikes and dredging. Improved reliability of the channel is imperative if the Alabama River is to reach its potential as a major inland waterway.

CRITICAL POINTS CITED

Furthermore, we respectfully request your consideration of the following points:

—Increased user fees and taxes serve to stifle all business associated with waterway activities. These taxes should be discontinued as revenue generators.

—Lower freight rates give producers a better export market, thus helping the trade business.

—Congress must fund the remaining term of the study by the Corps of Engineers and the State of Alabama, Florida and Georgia to resolve the two-basin water dispute in the region.

—Congress should amend the Endangered Species Act to require the consideration of economic impacts in any decision to list a specie as endangered or threatened, as well as mandatory designation of critical habitat at the time the species is listed.

—Construction of fourth dam in the area south of Claiborne on the Alabama River.

We sincerely appreciate the Committee's faith in the future of the great waterway systems of the State of Alabama and welcome its continued support of these vital projects.

STATEMENT OF THE CITY OF WETUMPKA, AL

Dear Mr. Johnston, the City of Wetumpka supports Coosa Alabama River Improvement Association in their budget request to the subcommittee. Please consider the following specific matters:

—Increased user fees and taxes tend to stifle all businesses associated with waterway activities: current plans call for fuel taxes to rise to $1.20. The user fees and taxes should be discarded or substantially reduced as revenue generators.

—Resume design and engineering work on the Coosa Project, which was suspended in 1983.

—Continue timely and complete dredging and appropriated maintenance for the Alabama River Channel.

—Continue Federal maintenance and operation of the Alabama River waterway from Mobile to Montgomery as well as Mobile Harbor.

—Continue operation and maintenance of the upstream reservoirs and hydropower plants at Allatoona and Carters Lake in Georgia.

—Make the Alabama River usable year-round by investing in a fourth dam in the area south of Claiborne.

We also would like to point out that:

—Extensive commitments to private investment on navigable waterways have been made on the assumption that Federal maintenance and operations of the waterways would be continued.

—Waterways provide efficient transportation productivity that lowers inflation and reduces national deficits.

—Lowered freight rates are in the national interest as manufacturers and farmers compete to improve our balance of payments.

—Congress must use every means to fund the remaining term of the study by Corps of Engineers and ma/Georgia/Florida to resolve the two-basin water dispute in the region.

—During the reauthorization of Endangered Species Act, the Congress should amend the Act to require the consideration of economic impacts in a decision to list a species as endangered or threatened as well as mandatory designation of critical habitat at the time the specie is listed.

—Studies of completed waterways, such as the Arkansas River and the Gulf Intracoastal Waterway, show that the returns fully justify the investment.

—The Waterways Trust Fund, maintained by user fuel taxes, should be considered an investment by the users and should be returned as an aid to expanded development.

Your consideration in this matter will be appreciated.

STATEMENT OF THE COOSA COUNTY, AL, COMMISSION

Dear Mr. Johnston, the Coosa County Commission is very much interested in the continued support of the Coosa-Alabama River Improvements and fully supports the Association requests for fiscal year 1994.

Timber and forest products are the main industries in Coosa County. We encourage that design and engineering work on the Coosa project be resumed. Timber and forest products are the main industries and offer the main employment for our area. Opening the Coosa River for barge travel would be a big impact on transportation and remove the heavy road usage from our county highways and lower freight rates which would reflect in a more efficient transportation.

STATEMENT OF RYAN-WALSH

Dear Senator Johnston, this statement is presented in support of the operations and maintenance budget request for new funding requests for the Coosa-Alabama River Improvement Association.

Ryan-Walsh is one of the largest stevedoring and terminal operations in the Port of Mobile and, as such, has first-hand knowledge of the importance of this vital waterway, not only to the commerce of the United States but to the State of Alabama and the Port of Mobile.

Our company employees 95 full time employees in the port and in addition has an annual payroll of $11,325,907.00. In 1992 a total of 4,964,471 metric tons were handled by Ryan-Walsh at the Port of Mobile, many of which were movements on our various waterway systems. A great majority of these movements were bulk commodities and forest products. Without this maintained inland waterway system the Port of Mobile's import and export tonnages would be drastically curtailed.

This support is part of our ongoing policy to support our regional waterways and, ultimately, the Port of Mobile.

We view with much concern the Clinton Administration's proposals on increased user fees and taxes. Our imports and exports are in a global economy and any increase in cost would reduce or stifle businesses associated with our waterways. We cannot have this happen for many reasons and respectively request that these additional fees and taxes on our waterways be rejected.

STATEMENT OF THE MOBILE AREA CHAMBER OF COMMERCE

Dear Senator Johnston, this statement is presented on behalf of the over 2,450 business members of the Mobile Area Chamber of Commerce in support of the fiscal year 1994 operations and maintenance budget request for new funding requests for the Coosa-Alabama River Improvement Association.

Our support for the request is predicated on the fact that the cargo moving on the extensive Alabama Waterways System, including the Coosa-Alabama River system, supports the Port of Mobile and many area industries. Only through an efficient transportation system and reliable waterways can benefits to these industries be realized.

We, therefore, request that you approve these requests.

STATEMENT OF THE ALABAMA STATE DEVELOPMENT OFFICE

Dear Senator Johnston, it has come to the attention of the Alabama Development Office that the Coosa-Alabama River Improvement Association Congressional Hearings Delegation will meet on March 28–29, 1993 in Washington, D.C. Though the ADO will not be represented at these hearings, we felt we should express our support for the Association's requests for fiscal year 1994. We are part of a collective effort to maintain and extend this particular waterway.

Among our concerns are:

—Increased user fees and taxes; current plans call for fuel taxes to rise to $1.20. User fees and taxes should be eliminated or substantially reduced.

—Resuming the design and engineering work on this project, which was suspended in 1993.

—The continued timely and complete dredging and appropriate maintenance for the Alabama River Channel.

—The continued Federal maintenance and operation of the Alabama River Waterway from Mobile to Montgomery as well as Mobile Harbor.

—The lowering of inflation and reduction of the national deficit through efficient transportation productivity that the Waterway provides.

—The lowering of freight rates—in the national interest as manufacturers and farmers compete to improve our balance of payments.

In addition, Congress must use every means to fund the remaining term of the study by the Corps of Engineers and Alabama, Georgia and Florida to resolve the two-basin water dispute in the region.

As an agency dedicated to the economic growth of Alabama, we feel that this waterway must be maintained and extended as an aid to expended development in our state.

Thank you for your consideration in this matter.

STATEMENT OF FIRST ALABAMA BANK, MOBILE, AL

Dear Senator Johnston, this statement is rendered in behalf of the Coosa-Alabama River Improvement Association and the request for funding projects on both the Coosa and Alabama Rivers.

We support the Association's request for fiscal year 1994 budget items as recommended by the Corps of Engineers as well as for certain needs that are not included in the budget in order to provide timely and complete dredging and appropriate maintenance of the Alabama River channel.

In 1983, the U.S. Army Corps of Engineers suspended design and engineering work on the Coosa project. We would hope that the Congress would look once again at resuming this work.

Details for these particular items are enumerated in the Association's testimony. With regard to O&M we are particularly concerned with maintenance dredging for the Alabama River channel, specifically below the Claiborne Lock and Dam, the channel maintenance from Mobile to Montgomery, the operation and maintenance of the upstream reservoirs, hydropower plants at Allatoona and Carters Lake in Georgia, and the infrastructure necessary to provide year round navigation on the Alabama River in order to maximize the already heavy investments by the federal government. In this regard we recommend studies be made for the placement of another lock and dam on the system below the Claiborne Lock & Dam and continued funding of the study by the Corps of the Alabama/Georgia/Florida two-basin water dispute.

Thank you, very much.

STATEMENT OF PH&J ARCHITECTS, INC.

Dear Mr. Chairman, we call your attention to the following concerns which impact our state in dramatic ways. We urge you to consider them in the most serious light, as we will not be present to present them personally.

Extensive commitments to private investment on navigable waterways have been made on the assumption that Federal maintenance and operations of the waterways would be continued. Waterways provide efficient transportation productivity that lowers inflation and reduces national deficits. Lowered freight rates are in the national interest as manufacturers and farmers compete to improve our balance of payments.

Congress must use every means to fund the remaining term of the study by the Corps of Engineers and Alabama/Georgia/Florida to resolve the two-basin water dispute in the region.

During the reauthorization of the Endangered Species Act, the Congress should amend the Act to require the consideration of economic impacts in a decision to list a species as endangered or threatened as well as mandatory designation of critical habitat at the time the specie is listed

Studies of completed waterways, such as the Arkansas River and the Gulf Intracoastal Waterway, show that the returns fully justify the investment.

The Waterways Trust Fund, maintained by user fuel taxes, should be considered an investment by the users and should be returned as an aid to expanded development.

We call on Congress to:

—Resume design and engineering work on the Coosa Project, which was suspended in 1983.

—Continue timely and complete dredging and appropriate maintenance for the Alabama River Channel.

—Continue Federal maintenance and operation of the Alabama River waterway from Mobile to Montgomery as well as Mobile Harbor.

—Continue operation and maintenance of the upstream reservoirs and hydropower plants at Allatoona and Carters Lake in Georgia.

—Make the Alabama River usable year-around by investing in a fourth dam in the area south of Claiborne.

Thank you for your hard work and diligence as you support these concerns.

STATEMENT OF AMERICAN GENERAL TRANSPORTATION, INC.

Dear Senator Johnston, you more so than anyone else in the Senate should appreciate the last ten years of economic struggle marine operators have suffered. Over 80% of the companies in business in 1980 are no longer operating as a result of mergers, bankruptcies and out right liquidation sales. To say times have been tough would certainly be an understatement.

To place the burden of such an unreasonable tax increase on one industry could very likely be the straw that broke the camel's back. It would certainly be disruptive to shippers with term contracts who cannot recover their costs for this type of increase and in many cases would simply mean the product would not be sold because of the transportation costs. As you know marine transportation has historically been the most fuel efficient and inexpensive transportation of bulk cargoes and as a result has been a great assistance toward getting our products to the market and improving our balance of payments.

To disturb this balance and offer nothing worthwhile in return would be foolish. This type of tax would simply divert many cargoes to a less efficient mode of transportation not hampered by this type of fuel tax and would virtually cause the tax not to be collected as a result of the cargoes being moved by other modes.

Please offer whatever assistance available to stop all tax increases for marine transportation and please explain to the American people that corporations do not generate money to pay tax. The American people carry these tax burdens regardless of where they are initially placed. This type of tax would increase the price of virtually every item shipped on the American waterways and would be significantly felt by the users of electric power in the states with coal generated electricity. Our waterways provide efficient transportation that helps lower inflation and reduces national deficits. Someone should explain to the American people that to increase tax would simply mean increased costs for them and would probably cripple an industry that furnishes jobs for many Americans.

I can promise you that our company could not survive this type of tax increase and the twenty people we employ will be added to the list of unemployed. We have made extensive commitments through purchasing new equipment and making capital improvements to our existing equipment believing that the federal government would continue to maintain our waterways. If this situation changes, we will very simply be out of business. I hope you will consider my comments and do whatever you can to assist in discarding user fees on marine transportation. If the present fees were reduced or deleted, everyone would benefit. If these fees are increased, I'll assure you that everyone will suffer. Thank you for your assistance.

STATEMENT OF THE SCOTT PAPER CO.

Dear Senator Johnston, Scott Paper Company is a major user of the river systems in Alabama. In 1992, 2.5 million tons of wood and 1.1 million tons of chips were transported by barge to our paper mill and chip exporting facility in Mobile, Alabama. Scott Paper's Southeast Timberlands employs 625 people who manage, buy, log and transport wood. These jobs are dependent on our ability to move wood by barge. These employees live in rural communities in Alabama and Mississippi and return over $25 million of payroll to small towns that often have little industry and few good paying jobs.

We are the procurement organization for our Scott Mobile plant. If we are not cost effective and competitive, this $2 billion facility and its 3,000 employees, won't be either.

The Alabama River is critical to our barge transportation system. In 1992, Scott shipped 841 M tons, or 34 percent of the wood used by its Mobile mill, down the Alabama River. The amount of wood that can be shipped on this river is dependent on the maintenance of adequate channel depth. During 1991–92, the Corps of Engineers did an excellent job of maintaining and improving the channel. Each year spring floods cause extensive siltation and shoaling, which threaten the navigability of the river. Yearly dredging is mandatory to restore and maintain a channel depth that allows barge shipments.

An area of great concern is the proposal to declare the shovel nosed sturgeon an endangered species. This action could result in a prohibition on dredging and subsequently close the Alabama River to barging. Economic impacts to Scott and the entire area would be devastating. Scott sincerely requests the economic impacts of this listing be considered, as well as amending the current Endangered-Species Act to require consideration of economic impacts in the decision to list any species.

River transportation provides a low cost, environmentally friendly alternative to other methods of moving bulky commodities. The reliability of the Alabama River is of paramount importance to Scott Paper and its employees. Scott Paper strongly supports the Coosa-Alabama River Improvement Association funding requests to improve and extend the waterway. The reliability of the river directly impacts our current shipping levels and future development plans.

RESOLUTION OF FLOYD COUNTY, GA

Whereas, Floyd County, Georgia is committed to promoting the maintenance and extension of waterway uses along the Coosa and Alabama Rivers from Rome, Georgia to Mobile, Alabama; and,

Whereas, Floyd County, Georgia is an active supporter of the collective, multistate effort to promote the development of a navigable waterway system along the Coosa and Alabama Rivers; and,

Whereas, Floyd County, Georgia supports the efforts of the Coosa-Alabama River Improvement Association; and,

Whereas, The citizens of Floyd County, Georgia have agreed to spend approximately one million dollars ($1,000,000 .00) to restore and make operational the Mayo Bar Lock and Dam to promote waterway uses along the Coosa River; and,

Whereas, The Board of Commissioners of Floyd County, Georgia has committed to requesting approximately five hundred thousand additional dollars ($500,000.00) from state and federal transportation sources to promote the Mayo Bar Lock and Dam restoration project; and,

Whereas, Both private and public investment to promote navigable waterways has been made in reliance on a federal commitment to promote and maintain waterway uses; and,

Whereas, Public investment in navigable waterways is a highly efficient and effective use of transportation resources.

Now, therefore, be it resolved by the Board of Commissioners of Floyd County, Georgia, and it is hereby resolved by the authority of same, as follows:

SECTION 1: The U.S. Senate's Subcommittee on Appropriations for Energy and Water Development is strongly urged to support the 1994 fiscal year funding requests and objectives of the Coosa-Alabama River Improvement Association.

This 9th day of March, 1993.

FLOYD COUNTY, GA.

STATEMENT OF THE MONROE COUNTY, AL, COMMISSION

Dear Senator Johnston, the Monroe County Commission, Monroe County, Alabama, respectfully submits this letter of support for Budget Request for FY–94 as submitted by the Coosa-Alabama River Improvement Association, Inc.

The full economic impact of the Southeastern part of the United States area will not be realized until the Coosa and the Alabama Rivers are fully developed with navigation possible from Rome, GA. to the Port of Mobile. For this to occur there must be navigation locks built into the dams north of Montgomery as well as a fourth dam South of Claiborne, Alabama for the Alabama River to be navigable year round. For this region of the nation to compete with the International markets and to attract 'additional capital investments, it is imperative that navigation be made possible from Rome, GA. to the Port of Mobile.

Until this is accomplished we respectfully request that funds be appropriated to continue dredging and maintenance for the Alabama River channel so that navigation below the Claiborne lock and dam is possible year round.

We respectfully request that the FY–94 budget request, as submitted by the U.S. Corp of Engineers, be approved without exception and with no cuts thereto.

STATEMENT OF THE MONROEVILLE AREA, AL, CHAMBER OF COMMERCE

Dear Senator Johnston, the Monroeville Area Chamber of Commerce, Monroeville, Alabama, respectfully submits this letter of support for budget requests for fiscal year 1994 as submitted by the Coosa-Alabama River Improvement Association, Inc. The Monroeville Area Chamber of Commerce is dedicated to the continued economic enhancement of operation of the Coosa-Alabama River System.

It is in the best long-term economic interests our membership in Monroe County, Alabama that the Alabama River be made usable year-round by investing in a fourth dam south of Claiborne. For example, the Alabama River Companies; their parent companies, Parsons & Whittemore of Rye, New York; and their joint venture partner, Abitibi-Price of Canada; all have a substantial capital investment of approximately $1.4 billion to date in property, plant, and equipment on the banks of the Alabama River at Claiborne.

These companies are one of the largest exporters of forest products through the port of Mobile,—and the Alabama River is crucial to their international marketing efforts. It is critical that we continue Federal maintenance and operation of the Alabama River waterway from Mobile to Montgomery as well as Mobile Harbor, in order to attract additional capital investments to this magnitude hence in Monroe County, state of Alabama. We ask that funds be appropriated to continue dredging and maintenance for the Alabama River channel, in order that it will be navigable year-round.

Waterways provide efficient transportation productivity that lowers inflation and reduce national deficits. The full economic impact of the Southeastern United States will not be realized until the Alabama River is navigable from Rome, Georgia, to the port of Mobile.

We respectfully ask that Congress look favorably upon these budget requests for fiscal year 1994 which are so critical to our continued economic development.

STATEMENT OF ALABAMA RIVER PULP CO., INC.

Dear Senator Johnston:

The Alabama River Companies, Alabama River Pulp Company, Inc., Alabama River Newsprint, Alabama Pine Pulp Company, and Alabama River Recycling Company is pleased to participate in the efforts to improve the Coosa-Alabama River Waterway and to maintain the Alabama River as a viable part of the inland waterway system of the United States. We support the Coosa-Alabama River Improvement Association's funding request for Fiscal Year 1994.

We are testifying as a part of a regional effort to improve the Coosa-Alabama Waterway. As the Alabama River channel is improved, we will have additional opportunities to expand our barging operations as much as economically possible to achieve lower transportation costs for inbound raw materials, chemicals, fuels, and outbound finished products.

Over the last four (4) years, the Alabama River Companies' complex, located on mile 69 of the Alabama River, has grown from an investment of $300 Million pulp and paper manufacturing complex to a total investment of $1.4 Billion with a combined total capacity of 1,100,000 tons of pulp and paper produced annually for export and domestic customers. We will start in the last half of this year to recycle approximately 80,000 tons of old newspaper and old magazines into newsprint paper.

Over the past years, we have studied the economic feasibility of barging finished products to our domestic customers in Wisconsin, Michigan, Ohio, Texas and the Northeastern section of the United States. Due to seasonal fluctuating river levels and the few water transportation companies interested in using the Coosa-Alabama Waterway, due to inadequate water levels, we have not found it economically justified to transport many of our inbound and outbound cargos by river barge. In the last year we barged no outbound cargo but received 82,800 tons of inbound fuel oil.

The Alabama River Companies present domestic shipments of finished product considered for barging is approximately 200,000 tons to Wisconsin and Michigan customers, approximately 150,000 tons to customers in Ohio and Northeastern United States plus 100,000 tons to customers in Texas for a possible total barging volume of 500,000 tons that may be shipped via the Tenn-Tom Waterway or other inland waterway systems.

It is our intent to use water transportation whenever economically justified because we predict this mode of transportation will experience the lowest rate of cost increase over the next ten (10) years.

While the Alabama River has an authorized depth of nine feet and at this level could be sufficient for the Alabama River Companies' barge movement of pulp from the mill to our domestic customers in Wisconsin, Michigan and Ohio and the newsprint shipments from this site. However, this draft historically has been available to commerical traffic for only part of the year.

The Corp's Mobile office is fully aware of the problems facing commerical interest on the Alabama River and within their discretionary authority, has instituted studies and corrective measures for these problems.

It is our interest that timely and complete dredging be continued for the Alabama River channel as well as Federal maintenance and operation of the Alabama River waterway from Mobile to Montgomery be continued.

As mentioned before we, along with many other industries, have made an extensive private investment on this waterway on the assumption that Federal maintenance and operations of the waterway will be continued.

Also we strongly urge that Congress use all possible means to fund the remaining term of the U.S. Corps of Engineers and Alabama/Florida/Georgia study to resolve the two-basin water dispute in this region.

Plus it is our feeling that the Waterways Trust Fund, maintained by user fuel taxes, should be considered an investment by the users and should be returned to the waterways to aid in their development.

We are pleased to be located on the Alabama River waterway in Monroe County and look forward to the improvement of this vital waterway. We must all work together to conserve our energy resources in the most efficient manner possible and develop waterways that provide efficient transportation productivity lowering inflation and reducing the national deficit.

Also the drastic effect on commerce and industrial operations and development on the Alabama Waterway due to the Alabama Sturgeon being classified as endangered or threatened in the lower section of the Alabama River plus other areas of Alabama's waterways is of great concern to our companies. All Alabama's Representatives and Senators must consider the potential economic effects of losing the Alabama Waterways would have on our State and its citizens. I am informed this classification is close to being posted in the Federal Register.

We respectfully request your concurrence and recommendation of funding being sought by the Coosa-Alabama River Improvement Association for fiscal year 1994.

STATEMENT OF ROBERT M. CRESWELL, CAMDEN, AL

As the former Resource Manager for Alabama River lakes, Corps of Engineers, I witnessed the development of the waterway and fully support the Coosa-Alabama River Development Commission's requests for the 1994 Budget and I am part of the collective effort to maintain the present waterway and extend it to Rome, Georgia when possible.

Due to the President's desire to raise other taxes, the user fees should be eliminated or reduced. This would encourage heavier usage of the waterway.

Continued dredging of the present channel must be maintained and the maintenance of the channel is essential. Federal maintenance of the Alabama River Waterway from Mobile to Montgomery as well as Mobile Harbor must be allowed to continue.

The operation and maintenance of the upstream dams and power plants at Carters and Allatoona must also be funded. The initial construction of the project carried with it assurances to investors along the rivers that the project would be maintained.

In another light, the Congress must provide the funds to continue the study by the Corps of Engineers and Alabama/Georgia/Florida to resolve the two-basin water dispute in this region.

Finally, I urge the Congress to amend the Endangered Species Act, when it is reauthorized, to require the consideration of economic impacts in any decision to list a species as endangered or threatened as well as mandatory designation of critical habitat at the time the specie is listed.

WARRIOR-TOMBIGBEE WATERWAY NAVIGATION IMPROVEMENTS

STATEMENT OF OFFA NICHOLS, JR., PRESIDENT, WARRIOR-TOMBIGBEE DEVELOPMENT ASSOCIATION

Senator JOHNSTON. Next, we will hear from the Warrior-Tombigbee Development Association with Offa Nichols.

ENDANGERED ALABAMA STURGEON

Mr. NICHOLS. If I may pick up right where they left off on the Alabama sturgeon, that fish has only recently been identified as a separate species. There are some serious questions in our minds as to whether the identification is really accurate.

Senator JOHNSTON. Now, how could they identify it if they cannot find it?

Mr. NICHOLS. Well, they found some in 1984. And they did the taxonomic studies, which led to it being classified as a separate species back at that time.

The recommendation that this thing be listed in the Federal Register came to Washington last year. It was sent back to the Department of the Interior stating that they wished to have better evidence of the current status of the fish, since none had been seen since 1984.

And lo and behold, at just about the time the election was over, the thing turned around and came back to Washington in the same state it had left a month or two earlier. The only difference was there were two anecdotal examples of the Alabama sturgeon having been "sighted" in the meantime.

And old fisherman that they encountered said, "Oh, yes. I catch 8 or 10 of those things every year."

They did not have one to show him. He did not have one to show them. [Laughter.]

In electrofishing being conducted by the Department of Conservation and Natural Resources in the State of Alabama under contract to Fish and Wildlife, the fellow in the front of the boat yelled, "I see an Alabama sturgeon. Come look."

Well, by the time the guy from the back of the boat got there, the fish was gone. Now, that is the evidence that they have found since 1984 that this fish exists.

What we are concerned about is the biologists from Fish and Wildlife Service say that this listing of this critter will not endanger the dredging program because the Corps can accomplish the dredging by installing wing walls or training works, which I am sure you are familiar with from the Mississippi River.

You are probably also familiar with knowing that those things are very, very sight specific. They have to be designed and fit in the river channel.

And the Corps of Engineers in Mobile has told Fish and Wildlife innumerable times, twice in writing to my personal knowledge—in fact, I have copies in my briefcase—that they have attempted to design these to work on the lower Tombigbee River where they would have to be put. They will not work.

But those same Fish and Wildlife people—and I think this is what is bothering Ralph—continue to tell their superiors through their chain of command, “These people are overreacting. They are paranoid on this issue. We are not going to close the river.”

Our experience, having heard that story before on other species that were listed, is—we are frightened. We are very much frightened about that.

The status of it is that the recommendation is here in Washington. We understand that it is in final review product, going to the Federal Register. And we are working very diligently to try to surface some of these questions that we think need to be answered before it is, in fact, listed.

NAVIGATION SYSTEM MODERNIZATION

Now, back to my testimony, a number of years ago, our predecessors, sponsoring the Warrior-Tombigbee project, asked the Congress for authorization for a study to modernize the Warrior-Tombigbee River system.

That study was done. The Corps of Engineers came up with positive benefit-to-cost ratios. The program was funded. And over the last 40-some years, all of the locks have been replaced with new and modern locks.

The projection was that if this was done, there would be 8 million tons of traffic on that system by 1966, which would more than pay back the Federal investment. The 8 million ton level was reached in 1960. No; I beg your pardon.

The 8 million tons was forecast to be reached in 1980. It was actually reached in 1966. In 1980, the level had reached twice that figure. And it has peaked out since that time at just short of 25 million tons.

Our contention is that the money has been well invested, has been well put to use. We have—since the Corps has not developed—not yet been able to release its budget for next year, we have come up with our own figures, which are included in our written testimony as to what we feel the capability requirements for the system is.

The number is $19 million. That is very close to what it has been in the last 2 years at $18 million. The latest example of the success on the system—Oliver Lock was one of the projects that you all authorized and funded in the Water Resources and Development Act of 1986.

The Oliver Lock was the first lock to go under construction. It was the first lock to be completed from groundbreaking until first tow through. It was 2 days short of 51 months.

It has been—the program has been very successful with the support of the Congress. We ask you to continue to support it. And we pledge to you that if you do, we will continue to do well with it.

Local investment has been—in that period of time we are talking about, it has been well over $3.5 billion, more than 10 times what the Federal investment in the project had been.

We are also frightened by the prospect of the fuel tax. In fact, I think the consensus is that if that $1 fuel tax were to be put in, just invite Fish and Wildlife to go ahead and list whatever they want to, because there will not be anything happening on the river except fishing.

And that is the end of testimony, sir.

Senator JOHNSTON. Well, we agree with you. I think the administration just made a mistake. I think the President has really said as much.

Mr. NICHOLS. Yes; I think they pulled out everything that OMB had been proposing over the last 5 or 6 years as possible sources of new revenue. And they must have just laid them out just like they were without anybody looking at them very seriously, now——

Senator JOHNSTON. I mean, it just——

Mr. NICHOLS [continuing]. And analyzing the impact on them.

Senator JOHNSTON. It beats anything as a result, but we will beat it in the process. If we do not, we are going to shut down a lot of waterways, but I think we will be successful.

Mr. NICHOLS. Thank you.

Senator JOHNSTON. Thank you very much. It was nice to have you back, Mr. Nichols.

[The statements follow:]

STATEMENT OF OFFA NICHOLS, JR.

SUMMARY OF THE REQUEST

The following is a summary of the funding items for the U.S. Army Corps of Engineers for fiscal year 1994 which bear on the needs of the Warrior-Tombigbee Waterway, and which we ask the Committee to approve:

Warrior-Tombigbee Waterway

Operations and maintenance funds required for fiscal year 1994	$19,000,000
Funds for new construction	
Total funds required	19,000,000

Because the President's proposed budget for fiscal year 1994 has not been released, we cannot comment on the adequacy of the funds which are proposed for the Corps of Engineers, as we normally do. Therefore we have made our own determination of the funding needs for the Corps for the Warrior-Tombigbee Waterway for fiscal year 1994. We have limited this request to funds for Operations and Maintenance, O&M, since we are led to believe that adequate New Construction funds have been appropriated to complete the Oliver Lock and Dam project.

We have developed the O&M requirement from our knowledge of the Corps regular annual program, the status of projects which are currently in progress, and others which require periodic funding, such as lock closures for cyclical maintenance, replacement of sealant materials and surfaces, etc.

The team effort working relationship between the Warrior-Tombigbee Development Association's user committee and the Mobile District, Corps of Engineers, is often cited as a model to be followed. Having been a part of the team for over 12 years, I am confident this requirement will be confirmed when the Corps is able to release its capability figures. The amount requested compares favorably with the amounts required and appropriated for fiscal year 1992 and fiscal year 1993, each being approximately $18 million. We emphasize the need for this level of capability funds if we are to have an adequate current year program, and to support on-going projects designed to improve safety and efficiency, and to reduce future costs.

Written statements of support are attached.

STATEMENT

I am Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association. Our members represent a broad cross-section of shippers, carriers, and the general business community in the Warrior-Tombigbee basin in Alabama, and eleven other states. The Association began in 1949 to work for the redevelopment of the Warrior-Tombigbee Waterway System. Construction of the original 17 locks and dams began in the late 1870's and was completed in 1915. The navigation system provided by these locks and dams had gradually deteriorated, and following World War II, the annual tonnage had levelled off at 2.5 million tons, due to the condition and limited capacity of the obsolete locks.

The Association's objectives have been not only the replacement of the outmoded locks and dams and improvements in the Port of Mobile area, but also the appropriation of sufficient O&M funds to support efficient and reliable navigation. Congress has generally appropriated the necessary funds to support these objectives. There are now just six (6) locks in the 400-plus miles from the head of navigation, located northwest of Birmingham, to the Port of Mobile. During the economic studies which resulted in this redevelopment, it was projected that by 1980, the Waterway would carry some 8 million tons annually. These levels were reached in 1966, and by 1980, twice the projected tonnage was being moved on the Waterway. Traffic has since reached a peak of 24 million tons.

With the completion of the new William Bacon Oliver Lock and Dam, the Warrior-Tombigbee Waterway has modern and standard-sized locks throughout its length. Together with the other five locks opened between 1954 and 1975, this system represents a noteworthy example of the positive impact of the water resource development program. The most persuasive evidence of the validity of this project and the wisdom of those who made it possible comes from the record as stated above. This record shows that, since the modernization of the Warrior-Tombigbee Waterway began, traffic has increased from just over 2 million tons annually to 24 million tons, some three times what had been projected.

During this decade, due in large part to the modernization of this waterway, several billion dollars have been invested by industry, agriculture, and other non-Federal governmental agencies, providing thousands of jobs. The Alabama State Docks, as a result of an ongoing $300 million plus expansion program, now offers the most advanced coal handling technology available in this country, along with similar improvements for handling grain, and bulk materials, steel and wood products. It is interesting to note that the investment by this one local agency exceeds the total Federal investment in building all the locks and dams on the entire waterway, including the new Oliver Lock. We are asking for the continuation of federal investments which pay off many fold.

Today's traffic and ever increasing demands require that the Waterway operate at peak efficiency on a full-time basis. Shipments of ore, steel, and related products are increasing because of the new and modern U.S. Steel facilities. The continued efficiency and modernization of the waterway were important factors in U.S. Steel's decision to further modernize these facilities—clearly a major factor in the survival of Fairfield as a viable facility. This brings U.S. Steel's recent investments to over $1 billion. Announcements of additional investments are expected. A $100+ million mini-mill has been built near Tuscaloosa. Increasing tonnages from its production are going to international markets. Major facilities for mining interests, forest products and marine equipment account for well over another $1 billion in investment. A new underground coal mine is under construction alongside the Warrior River, with projected annual production of 4 million tons. This will place it among the top four or five largest underground mines in the United States. It is a world class facility, and its product will move through an adjoining barge loading facility on the Warrior River. The efficiency and reliability of the waterway are key factors in the development and competitiveness of these facilities. Thousands of jobs depend on the Waterway.

These are but examples of how this waterway is so central to the economy of this entire area, impacting both domestic and international markets. Attached with this statement are letters further highlighting this importance. I hope you will note the wide range of interests represented by these statements: financial institutions; public utilities; port facilities; coal mining, deep and surface; manufacturers; suppliers; marine interests; and even department stores and bottlers. These represent a broad cross-section of the economic heartbeat of an entire region. Throughout these statements you will find repeated references to the importance of confidence in the waterway to the willingness of business and industry to continue to invest in our area, and of their customers to depend on its reliability for the movement of their products.

With respect to the actual funding needs, we have determined the requirement to be $19 million. If we were able to see the Corps real figures, I suspect it would be at least $1 million greater. However, because of the late budget submission this year, we have been denied access to any specific budget projections, and have therefore tempered our estimates by the actual experience in fiscal year 1992 and fiscal year 1993. We believe the $19 million will support the minimum work which is required to insure efficiency and reliability of the Waterway for both the short term and the long term. This level of funding is necessary to support the day-to-day O&M program, and to continue on-going channel improvements in the approaches to the bridges at Jackson and Naheola, both on the Tombigbee River. The Naheola project will be ready for construction and installation of the bank stabilization works. Funding is needed to undertake unanticipated surveys required under the Endangered Species Act, and to continue purchasing critical upland disposal sites for dredged materials. There are several sites which have involved very difficult negotiations, which are now at the point of agreement, and we need funds for those. Without this level of funding these critical actions cannot be continued during fiscal year 1993. These funds are essential to increase efficiency and improve traffic flow through some of the most difficult reaches of the Waterway, thereby enhancing its ability to handle three times the traffic than had been anticipated; and to the reduction of sedimentation and shoaling, which should, in turn, reduce future O&M costs.

The cost area in which we have the greatest uncertainty is related to increasing expenditures stemming from the Endangered Species Act. Last year's we stated as follows:

"Prior to summarizing, I must alert the Committee to an increasingly serious matter; which while not a matter for which specific funds are being identified in this request, is very clearly beginning to dilute the effectiveness of the funds provided for the O&M program. This is a very ominous concentration by Fish and Wildlife Service on the rivers of Alabama. This is resulting in what seems to be wholesale scale proposals to list various mussels and fish as endangered or threatened species. There are over 12 such cases pending, one of which could either completely shut down navigation on the lower Tombigbee River, or at best require huge and totally uneconomic O&M expenditures in an attempt to keep the river open. We will of course be addressing this issue more directly through other actions."

That statement turned out to be prophetic. We are now addressing this matter on two fronts; one on-going, the other pending. On the on-going issue, the Corps had just had to agree to undertake an extensive survey, likely to cost several hundred thousand dollars over the next year, in order to receive withheld biological approvals from Fish and Wildlife, in connection with its regular annual maintenance dredging program. In this survey they are in effect being required to either verify or disprove the premises upon which Fish and Wildlife based the decision to list a species as endangered. These verifications or refutations should be determined as part of the listing process, rather than being left to vagarious and whimsical interpretations by the individual field offices of FWS.

The pending item is more ominous. There is a pending recommendation to list the Alabama Sturgeon as endangered, and to declare specific areas as critical habitat. The critical habit encompasses areas wherein regular annual maintenance dredging is required on the lower Tombigbee and Alabama Rivers. Fish and Wildlife states that conventional maintenance dredging is not compatible with the habitat needs of the sturgeon, and should be replaced by installing features along the waterway which they refer to as "wing walls". These features are more commonly known as training dikes, and are typically employed in site-specific areas where competent engineers have determined their likely usefulness and cost effectiveness. In the area under question on the Tombigbee River, competent engineers have determined that these devices are not suitable at these sites. Notwithstanding, biologists, not engineers, from Fish and Wildlife continue to state publicly and to their superiors, that the listing of this fish will not stop or cause problems for navigation. The shippers and receivers of 20+ annual million tons of commerce have not found the enforcers of the Endangered Species Act to be that flexible, once a listing is made.

Should it be determined in the future that some new design or technique would likely render training works effective, we would then be looking at a long and expensive process. This would require engineering studies, design, technical reviews and approval, Congressional Authorization and Appropriations, and finally construction. We know from experience that this process takes years. With any significant restrictions in place while this was going on, the rivers would have lost their effectiveness and reliability as transportation arteries. The commerce would be gone, and the region devastated. Both river systems would lose access to and from the Gulf ports, and to international markets.

In closing, we believe the Warrior-Tombigbee Waterway is a classic example of the positive aspects of the Civil Works Program. The Congress has seen its potential and has supported its development. And now the project continues to demonstrate its worth, having tripled the projected annual tonnage and benefits.

During the severe drought in 1988, this waterway operated normally, and with the Tennessee-Tombigbee connection provided an alternate route for cargo unable to move otherwise. Annual tonnage rates more than doubled during this period. There are large, national carriers now operating regularly on the Warrior-Tombigbee and Tennessee-Tombigbee as a result of their 1988 experience.

We endorse and seek the approval of these items. I, as President of the Warrior-Tombigbee Development Association, our other Officers, Directors and Members, appreciate the consideration the Chairman and members of this Subcommittee and its staff have shown us over the years. I emphasize that the funds which we seek are for investment, not expense. This is seed money, spawning reinvestment many times over. The record of growth in tonnages moved and non-federal investments by users and local agencies demonstrate this. We ask for your support once again.

We are attaching additional written statements of support, along with a witness list, representing a cross-section of business, industry, and the public.

Thank you. We particularly emphasize our thanks for your leadership and support on the Oliver Lock project. This was the first lock to begin construction under the 1986 Water Resources Development Act, and the first to be completed. Ground was broken on April 13, 1987, and the first tow locked through on July 11, 1991, two days less than 51 months later. Only with the preparations and efficient construction schedule made possible by your support could this have been done.

We stand ready to answer questions.

WARRIOR-TOMBIGBEE DEVELOPMENT ASSOCIATION LIST OF STATEMENTS

Alabama Electric Cooperative, Andalusia, AL
Alabama Power Company, Birmingham, AL
Alabama State Docks, Mobile, AL
American Cast Iron Pipe Company, Birmingham, AL
American Commercial Barge Line Company, Harahan, LA
Buffalo Rock Company, Birmingham, AL
Dravo Basic Materials Company, Inc., Birmingham, AL
Dravo Basic Materials Company, Inc., Mobile, AL
Drummond Coal Company, Jasper, AL
First Alabama Bank, Mobile, AL
Gulf Power Company, Pensacola, FL
Hunt Refining Company, Tuscaloosa, AL
Mobile Area Chamber of Commerce, Mobile, AL
Navios Ship Agencies, Inc., Mobile, AL
Parker Towing Company, Tuscaloosa, AL
Ryan-Walsh, Incorporated, Mobile, AL
Scott Paper Company, Mount Vernon, AL
South Central Bell, Birmingham, AL
Southern Company Services, Inc., Birmingham, AL
State of Alabama, Montgomery, AL
Tenn-Tom Towing Company, Mobile, AL
Thompson Tractor Company, Birmingham, AL
Tuscaloosa, City of, Tuscaloosa, AL
Tuscaloosa Steel, Tuscaloosa, AL
United States Steel Corporation, Fairfield, AL
Volkert & Associates, Inc., Mobile, AL
Jim Walter Resources, Inc., Brookwood, AL
Warrior & Gulf Navigation Company, Chickasaw, AL

STATEMENT OF ALABAMA ELECTRIC COOPERATIVE, INC.

Dear Mr. Chairman, on behalf of Alabama Electric Cooperative, Inc. (AEC) and its member systems, I would like to request your continued support of the fiscal year 1994 Corps of Engineer's funding for the Warrior-Tombigbee and the Port of Mobile.

The most economical method to ship coal to our Lowman Power Plant is by water transportation. Our member systems depend on us for reliable, low cost electricity; therefore, keeping our fuel transportation cost down is one vital way to ensure that our rates will remain as low as possible. I am providing you with a detailed statement to further explain AEC's position in this matter and I earnestly request that adequate funding be appropriated for the Warrior-Tombigbee Waterway and the Port of Mobile.

I sincerely hope that you will lend your support to see that the Corps of Engineer's budget request is approved. Thank you for your continued support in this matter and other matters related to the rural electric program.

Alabama Electric Cooperative, Inc. (AEC), a wholesale electric power supplier for central and south Alabama and the Florida panhandle who through its 21 member-owners provides electricity for over 260,000 consumers, supports the testimony of Col. Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association, before this subcommittee.

The Black Warrior-Tombigbee Waterway (BWT) and the Port of Mobile are vital components in our ability to transport coal to our generating plants. The availability of an efficient mode of transportation is critical to our success and to our ability to serve those consumers dependent upon us for their electricity.

Because AEC serves sparsely populated areas, the cost associated with the distribution of electric energy is substantially greater than in heavily-populated urban areas. Any savings realized in the generation, transmission and distribution of electric energy is vitally important to AEC and its member owners. With fuel and transportation costs accounting for about 26 cents of every dollar AEC spends, economical transportation costs enjoyed through utilization of the BFT for our generating plants becomes even more vital to our economic and financial viability.

AEC's largest and most efficient fossil-fired generating plant, the Charles R. Lowman Plant, is located at mile-point 89 on the BWT. One of the main reasons this location was chosen is the relatively low transportation costs afforded by the waterway. AEC annually transports about 1,000,000 tons of coal to the Lowman Plant via the BWT.

In addition, AEC operates the nation's only compressed air energy storage plant in McIntosh, AL. This plant has increased the quantity of coal required for the Lowman Plant, making the BWT an even more critical component in AEC's operations.

AEC maintains a potential site on the BWT as a location for a future baseload generating plant should the need arise for its development. This location was selected primarily because of its access to efficient and reliable transportation provided by the BWT.

AEC's interests in the BWT and the Port of Mobile, however, extend beyond its own operations. These transportation facilities help Alabama reach world markets with regionally-produced goods. The availability of an efficient mode of transportation for moving bulk commodities is the major need in successfully functioning in today's global economy.

Moreover, the Port of Mobile is helping reverse trade deficits by providing exporters a means to affect the balance of trade with foreign countries.

AEC has been serving central and south Alabama and the Florida panhandle for over half a century. The electricity generated in its plants and distributed by its member owners to consumers, business and industry is a major factor in the future development and expansion of the area's human and natural resources.

AEC and its member owners fully support the Corps of Engineers' 1994 budget request for $19 million in operation and maintenance funds for the BWT and the appropriation of adequate funds for operation and maintenance for Mobile Harbor. This level of funding should help assure that BWT and Port of Mobile will continue to function for the benefit of not only AEC but the entire region as well.

STATEMENT OF SOUTHERN COMPANY SERVICES, INC.

Dear Senator Johnston, the Warrior-Tombigbee Waterway is vital to the economic health of Alabama. The state's water transportation system must be efficient and well-maintained for the basic industries, such as mining and heavy metals, to provide a sound economic base for the state and for Alabama to enjoy economic growth.

Alabama Power Company's continued interest in the Warrior-Tombigbee Waterway is two-fold. First, our business is dependent on the general economic health of the state; and, second, we are a primary user of the waterway. For nearly three decades, we have used economical water transportation to deliver coal to two of our major electric generating plants.

Four of Alabama Power Company's seven fossil-fueled, electric generating plants are located on the Warrior-Tombigbee Waterway system. Coal from the Warrior coal field is delivered to locations near the coal field and loaded into barges for shipment to two generating plants in the southern and central parts of Alabama. The 1,525-megawatt Plant Barry in Mobile County, which began operation in 1954, is supplied primarily by the Warrior-Tombigbee Waterway, as is the 500-megawatt Plant Greene County near Demopolis.

Adequate funds for operation and maintenance must be made available to the Corps of Engineers to continue efficient operation of the waterway and to avoid expensive and unnecessary interruptions to river traffic. Therefore, we support appropriation of $19 million in O&M funds for the Black Warrior-Tombigbee plus adequate funds for Mobile Harbor.

Alabama Power Company received 5.15 million tons of coal in 1992 which were transported on the Warrior-Tombigbee Waterway. This represented 25 percent of the 17.6 million tons used to generate electricity for our customer's use. Failure to properly maintain the waterway can have a significant adverse effect on the cost of providing electric service to Alabama Power Company's approximately 1.2 million customers.

Alabama Power Company supports the collective efforts of the Warrior-Tombigbee Development Association, of which it is a member, to obtain for the Corps of Engineers an adequate operations and maintenance budget which will insure the long-term efficient and economical viability of the waterway.

STATEMENT OF THE AMERICAN CAST IRON PIPE CO.

Dear Senator Johnston, I request your approval of the fiscal year 1994 Corps of Engineers funding request for the Warrior-Tombigbee Waterway. In addition, I also request your support for the O&M Funds needed at Mobile Harbor.

ACIPCO exports approximately 50,000 tons per year through the Port of Mobile. In previous years, we have shipped substantial export pipe tonnage by barge on the Warrior-Tombigbee Waterway. We expect to do so again in the future. The Warrior-Tombigbee is also important because of raw steel that is imported to Tuscaloosa Steel Corporation, which is one of our suppliers of steel skelp used to manufacture a superior quality steel pipe for oil and gas pipeline service. Finally, we are currently using the waterway for movements of steel skelp from Tuscaloosa to Port Birmingham for subsequent movement by rail into our Birmingham plant.

I will be most appreciative if the Subcommittee will afford Colonel Offa S. Nichols, Jr., president of the Warrior-Tombigbee Development Association, every consideration when he presents the Association's testimony. We, at ACIPCO, join in the collective effort to improve the efficiency and reliability of the Warrior-Tombigbee Waterway.

I look forward to your favorable decision regarding this most important project. With best regards.

STATEMENT OF THE BUFFALO ROCK CO.

Dear Chairman Johnston, our operations cover a three state area with Mobile being one of our Divisions, and we are certain that the availability of freight usage on the Warrior-Tombigbee Waterway is a very important part of trying to keep transportation costs at a most favorable level to businesses.

We feel that in the years ahead the Waterway will become even a more important industrial part of the Southeast, and we trust that Congress will give full support to a realistic budget for the Corp of Engineers for the Warrior-Tombigbee Waterway and the Port of Mobile for the forthcoming year.

Thank you very much for your past help on this most important matter.

STATEMENT OF THE DRAVO BASIC MATERIALS CO., INC.

Dear Senator Johnston, as a long time member of the Mobile business community and one which uses the waterways of Alabama on a daily basis, we realize the invaluable contribution of these facilities to the overall economy of our region. Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association, will present testimony stressing the need for maintaining and enhancing the efficiency and reliability of the Warrior-Tombigbee System as well as the importance of low-cost, energy efficient water transportation to local, national and international trade. We fully support and endorse his testimony.

Dravo Basic Materials Company, Inc. is one of the leading producers of construction raw materials and aggregates on the Gulf Coast. We rely extensively on the waterways of Alabama, Florida, Louisiana, Mississippi and Texas for production and delivery of our products. In 1992 we transported via Alabama waterways in excess of 1,000,000 tons of sand and gravel. We also transported over 700,000 tons of limestone as well as significant quantities of other products.

Our projections for 1993 are:

	Tons
Sand and gravel	1,300,000
Other	700,000

Dravo Basic Materials Company, Inc. operates a fleet of 23 boats, 85 barges and 7 dredges. We maintain a large terminal and handling facility on McDuffie Island in Mobile, Alabama in addition to numerous support facilities throughout South Alabama and the Gulf Coast.

The maintenance of our waterway system is essential for the efficient, orderly production and delivery of materials. In order to provide this capability, it is imperative that the Army Corps of Engineers be provided with the appropriations necessary to continue the maintenance and development of the Warrior-Tombigbee Waterway System as requested. We fully support the appropriation of $19 million in operations and maintenance funds for the Black Warrior-Tombigbee Waterways for fiscal year 1994. This level of funding is necessary to support the day-to-day operations and maintenance program, as well as the continuation of on-going channel improvement projects on the waterway. Funding will also be required to undertake unanticipated surveys required under the Endangered Species Act and to continue purchasing critical upland disposal sites for dredged material.

It is also requested that adequate funds be provided to ensure that the Corps has the capability and flexibility necessary to maintain the utilization of the Mobile Harbor.

We sincerely appreciate the Committee's faith in the future of the State of Alabama and welcome its continued support of these vital projects.

Dravo Basic Materials Company has a vested interest in the Warrior-Tombigbee Waterway and the Port of Mobile. We dredge sand and gravel in the Alabama River and barge sand, gravel, and limestone on the Alabama, Tenn-Tom, and Mobile Rivers to Mobile. In 1992 we shipped over 1,000,000 tons of aggregates on these river systems. Dravo supports the testimony to be given by Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association, to improve the efficiency and reliability of the Warrior-Tombigbee Waterway.

We fully support the appropriation of $19 million in operations and maintenance funds for the Black Warrior-Tombigbee Waterways for fiscal year 1994. The level of funding is necessary to support the O&M program and to continue on-going channel improvement projects in the approaches to the bridges at Jackson and Naheola, both on the Tombigbee River. Also, additional funding is needed to undertake unanticipated surveys required under the Endangered Species Act, and to continue purchasing critical upland disposal sites for dredged materials from maintenance projects.

We also support the appropriation of adequate operations and maintenance funding to ensure full utilization of Mobile Harbor.

Thank you for your consideration.

STATEMENT OF THE FIRST ALABAMA BANK

Dear Senator Johnston, the Port of Mobile and the inland waterways serving it are major factors in the economy of Alabama and the U.S. Gulf Coast. The Black Warrior-Tombigbee Waterway is a vital factor in this respect. It serves the manufacturing, mining and the agricultural areas and industrial production facilities in western Alabama. The waterway has served as an economic stimulant for one hundred years, having been periodically improved and today it is a modern system with the recent completion of the Oliver Lock and Dam.

Many basic materials move on the Black Warrior-Tombigbee system, and most of the coal that is exported from Mobile is shipped down this waterway. Therefore, it is important for adequate operations and maintenance that the amount needed for operations and maintenance of $19 million be appropriated. For fiscal year 1993 the comparable figure was $18 million, for fiscal year 1992, $18.1 million. This level of funding is necessary to support the day-to-day O&M program, and to continue ongoing channel improvement projects in the approaches to the bridges at Jackson and Naheola, both on the Tombigbee River. The Naheola project will be ready for construction and installation of the bank stabilization works. Also, additional funding is needed to undertake unanticipated surveys required under the Endangered Species Act, and to continue purchasing critical upland disposal sites for dredged materials.

We urge your support of an appropriation of $19 million in O&M funds for the Black Warrior-Tombigbee for fiscal year 1994. We also request support of the appropriation of adequate O&M funds for Mobile Harbor.

We feel this is a valid investment by the Federal Government, and will continue to be matched many times over by local investment.

STATEMENT OF THE GULF POWER CO.

Dear Senator Johnston, Gulf Power Company is an investor-owned electric utility and a subsidiary of The Southern Company; we serve 305,040 customers in Northwest Florida. Our Company utilizes coal for over 99 percent of its total generation requirements within Florida and consumes over 3,000,000 tons per year for that purpose. Over 90 percent of our coal deliveries in Florida are dependent upon waterway transportation.

In the past, Gulf Power has moved millions of tons of coal on both the Tennessee-Tombigbee and the Black Warrior-Tombigbee Waterways or through the Port of Mobile. Recently, we have resumed importing a portion of our requirements through the Port of Mobile. This is expected to be an important option for us as we require lower sulfur coal in the future. Also, the option of purchasing coal shipped on the Warrior-Tombigbee remains a major factor in our coal procurement program. Gulf Power depends on using these waterways, therefore, we totally support the need for adequate funding to properly maintain and improve operations.

In order to provide reliable electric service at the most economical cost to our customers, Gulf must continue to receive waterborne coal shipments. In addition to ensuring that adequate fuel supplies can be transported to our generating plants, the availability of waterway systems significantly contributes to future industrial growth in our service area.

We are in full support of the efforts of the Black Warrior-Tombigbee Development Association to provide efficient and reliable waterway systems. We urge you to approve the Corps' operating and maintenance budget request for $19.0 million to maintain the Black Warrior-Tombigbee Waterway for fiscal year 1994 and for adequate funding for maintaining the Mobile Harbor.

We feel that it is not only in Gulf Power's interest to support the maintenance and improvement of these waterways, but also in the best interest of the customers of our service area and the nation. The capability to transport coal and other commodities via the Black Warrior-Tombigbee Waterway and the Port of Mobile is vital to the economy of our region.

STATEMENT OF THE HUNT REFINING CO.

Dear Senator Johnston, as a concerned user of the Warrior-Tombigbee Waterway, we would like to state our support for the Waterway and for the testimony to be given by the President of Warrior-Tombigbee Development Association, Offa J. Nichols, Jr. We would also like to state that we join in the Warrior-Tombigbee Development Association's collective effort to improve the efficiency and reliability of the Waterway.

Hunt Refining Company is a 38,000 barrel per day crude oil refinery located in Tuscaloosa, Alabama at mile marker 337 on the Black-Warrior River which employs approximately 220 employees from the State of Alabama. Our refinery produces such products as all grades of gasoline, several types of asphalt, fuel oils and coke. We receive approximately 35,407 long tons of crude oil by barge each month. We also receive approximately 2,183 long tons of AC–20 asphalt and 406 long tons of mineral spirits by barge each month. We, in turn, barge out approximately 30,829 long tons of crackerfeed and 1,705 long tons of asphalt each month. We also receive approximately 2,841 long tons of AC–20 asphalt at our Decatur terminal located at mile marker 305 on the Tennessee River. The above tonnage represents millions of dollars of revenue.

Our crucial reason for needing the Waterway is that we make a product called "crackerfeed," named so because it is used in catalytic crackers. The only way we have of delivering this product is by the waterways. Fortunately, the refineries that we ship to are all over the intercoastal waterway.

Hunt Refining has encountered various limitations while using the Warrior-Tombigbee Waterway System. Among the limitations are draft limitations, lock delays and bridge delays. All of these limitations increase our transportation costs of crude and product.

If the Waterway experiences any further degrading, it would cause Hunt Refining Company to experience a substantial increase in transportation costs. In addition, it would have a negative impact on future employment.

We also receive crude oil from international freighters. This oil is first offloaded in Mobile into storage tanks at Alabama Bulk Terminal and Amerada Hess. A portion of the crude oil is then barged to our refinery.

In regard to the Port of Mobile, we would like to emphasize the draft limitations there and hope we can continue to have funding to allow us to offload our international freighters and move them in and out of Mobile in an economical and safe manner.

We would like to indicate that we support full funding of the Corps' budget request for $19 million in Operations and Maintenance funds for the Black Warrior-Tombigbee for fiscal year 1994. This level of funding is necessary to support the day-to-day O&M program, and to continue on-going channel improvement projects in the approaches to the bridges at Jackson and Naheola, both on the Tombigbee River. Also, additional funding is needed to undertake unexpected surveys required under the Endangered Species Act, and to continue purchasing critical upland disposal sites for dredged materials. We also support the appropriation of adequate Operations and Maintenance funds for Mobile Harbor.

STATEMENT OF MOBILE AREA CHAMBER OF COMMERCE

Dear Senator Johnston, this statement is presented on behalf of the over 2,450 business members of the Mobile Area Chamber of Commerce in support of the fiscal year 1994 operations and maintenance budget request for new funding requests for the Warrior-Tombigbee Development Association.

Our support for the request of the Warrior-Tombigbee Development Association is predicated on the fact that the cargo moving on the Warrior-Tombigbee waterway supports the Port of Mobile and many area industries. Only through an efficient transportation system and reliable waterways can benefits to these industries be realized. We, therefore, request that you approve these requests.

STATEMENT OF NAVIOS SHIP AGENCIES, INC.

Dear Senator Johnston, we request that you support the U.S. Corps of Engineers Operations and Maintenance budget of $19 million for the Warrior-Tombigbee Rivers. We carry into the Port of Mobile, in our vessels and vessels we represent, 2.8 million tons of iron ore and 1.6 million tons of furnace coke per year with the majority bound for industries in the State of Alabama. The Port's ability to maintain its present draft has enabled us to provide additional cargo. The continued dredging of the Warrior-Tombigbee allows this cargo to go through the waterway system of the Tombigbee.

A large portion of this cargo is for steel mills operating in the Birmingham, Alabama area. These imports of raw materials enable the steel mills to supply steel for various supplies to this nation. Some of these cargo products from the steel mills are re-exported through the Port of Mobile, which helps to reduce our trade imbalance. The efficiency and reliability of waterways commerce is essential for us to provide the raw materials necessary for our principals to meet the demands of the various markets within the State of Alabama and the United States.

We have been in operation since 1957 utilizing the Port of Mobile, the Warrior-Tombigbee and the Black River systems, and we realize the importance in this tight economic picture the country is facing. Therefore, we solicit your support and we join in the collective efforts of all those affiliated companies who realize the importance of maintaining this waterway system so that we may continue to bring in the necessary raw materials for our manufacturing industries within the State of Alabama. For these reasons, we strongly support the $19 million for the Operations and Maintenance programs for FY/94.

STATEMENT OF THE PARKER TOWING CO., INC.

Honorable Mr. Johnston, my name is Richard A. Kienitz and I am Vice President of Sales for Parker Towing Company of Tuscaloosa, Alabama.

We are a full service marine transportation company operating a fleet of boats and barges and several ports on the southern portion of the U.S. Inland Waterways System. We are involved in the transportation of all types of commodities including coal, stone, wood products, steel, salt, manufactured products, chemicals, and oil. We have been in operation for over fifty years.

Parker Towing Company endorses and supports fully the efforts of the Warrior/Tombigbee Development Association to improve the overall operation of this vital waterway system. The Warrior/Tombigbee System and the Port of Mobile are of great importance to our company and the industries we serve. Proper and adequate funding of the waterway project will ensure that more industries can rely on this energy efficient delivery system. The region's employment and economic well-being could be adversely affected to a great degree should the efficiency of the waterway be degraded.

As a member of the Warrior/Tombigbee Development Association, Parker Towing Company emphatically supports the Corps of Engineers' budget request of $19 million in operation and maintenance funds for the Warrior/Tombigbee System for fiscal year 1994. In addition, we support the Corps' request for operation and maintenance funds for Mobile Harbor.

STATEMENT OF RYAN-WALSH, INC.

Dear Senator Johnston, this statement is presented in support of the operations and maintenance budget request for new funding requests for the Warrior-Tombigbee Waterway.

Ryan-Walsh is one of the largest stevedoring and terminal operations in the Port of Mobile and, as such, has first-hand knowledge of the importance of this vital waterway, not only to the commerce of the United States but to the State of Alabama and the Port of Mobile.

Our company employees 95 full time employees in the port and in addition has an annual payroll of $11,325,907.00. In 1992 a total of 4,964,471 metric tons were handled by Ryan-Walsh at the Port of Mobile, many of which were movements on our various waterway systems. A great majority of these movements were bulk commodities and forest products. Without this maintained inland waterway system the Port of Mobile's import and export tonnages would be drastically curtailed.

We, therefore, request the Warrior-Tombigbee Development Association's requested budgeted amount of $19 million for the operating and maintenance program for fiscal year 1994 be approved.

We view with much concern the Clinton Administration's proposals on increased user fees and taxes. Our imports and exports are in a global economy and any increase in cost would reduce or stifle businesses associated with our waterways. We cannot have this happen for many reasons and respectively request that these additional fees and taxes on our waterways be rejected.

STATEMENT OF THE SCOTT PAPER CO.

Dear Senator Johnston, Scott Paper purchased the Mobile Mill from Hollingsworth and Whitney in 1953. Including the original purchase price, Scott has invested over $2,000,000,000 in the facility and support operations in forty years, that is an average of $50,000,000 a year using today's dollars.

Scott is currently well into a $344,000,000 project to upgrade the existing facility. A completely voluntary part of the project is to install Steam Condensate Strippers into the new recovery boiler which will continue to lower the B.O.D. levels to the waste treatment facility and ultimately to the waters of the State.

A significant factor in approving this latest capital investment in Mobile is the cost of pulp produced at the Mobile Mill which is directly related to an advantaged wood cost. As you may well know, Scott's River Transportation system of raw materials to Mobile is a significant part of wood cost.

For the past ten years, Scott has enjoyed the use of the Warrior-Tombigbee Waterway and the Port of Mobile. In the first year Scott began taking advantage of river transportation, some 1.06 million tons of forest products were transported with two tug boats and forty barges. Due to the efficiencies and reliability of the Waterway, Scott will transport in excess of 3.8 million tons of forest products this year, 1.25 million of which is destined for export to International Markets. To accomplish this task now requires over 20 tug boats, 150 barges and over 200 jobs directly related to transportation.

To operate on the Waterway at this level requires operating expenses in excess of $7.9 million. These operating expenses are required to support a $28 million capital investment in wholly owned woodyards and joint venture processing facilities.

With this investment in the Mobile Operations and on the Waterway it is paramount that the Waterways be adequately maintained.

The proposed appropriations for the fiscal year 1994 Operations and Maintenance budget of $19,000,000 should provide sufficient funding for the Corps of Engineers to adequately maintain the Waterway and upgrade the approaches to the Jackson and Naheola bridges. In addition, Scott recommends and fully supports adequate funding for the O&M budget for the Mobile Harbor.

Scott Paper Company's Pulp and Paper Mill in Mobile has prospered as a result of the development of the Warrior-Tombigbee Waterway.

It is crucial that this Waterway continue to be fully operational for the Mobile Mill to maintain a competitive position in national as well as international markets. The Warrior-Tombigbee Waterway is the "Main Artery" that supports the Mobile Mill and 3300 Scott employees.

With these considerations in mind, we ask that you give the requested budgets your full support.

Thank you for your help, time and consideration in this matter.

STATEMENT OF SOUTH CENTRAL BELL

Dear Senator Johnston, The United States economy as a whole and Alabama in particular has a direct impact on the overall well-being of South Central Bell. The positive impact of events and/or projects on the economy of Alabama is of major interest to South Central Bell. The Warrior-Tombigbee Waterway and the Port of Mobile are two such projects.

Their impact in generating new business and expanding existing business helps to spur economic growth from one end of our state to the other. This economic impact helps to delay our need for rate relief from Alabama ratepayers and in general creates a greater quality of life for all Alabamians.

We support the efforts of the Warrior-Tombigbee Development Association and its President, Offa Nichols, Jr., because we believe their efforts will lead to long-term benefits in the areas of energy conservation and international trade within the United States.

I would also like to lend my support to the Corps of Engineers' request for adequate funding for the operation and maintenance of the waterways and ports.

I know the Association can count on your support in this matter.

STATEMENT OF SOUTHERN COMPANY SERVICES, INC.

Dear Senator Johnston, on behalf of Alabama Power Company, Gulf Power Company, and Mississippi Power Company, I am writing to express our support for the Warrior-Tombigbee Development Association and its president in their efforts before your committee. Because of the importance of the Warrior-Tombigbee Waterway to local, national, and international trade, the Southern electric system joins with the Warrior-Tombigbee Development Association in an effort to improve the efficiency and reliability of the Warrior-Tombigbee Waterway.

For the past twenty-eight years, Alabama Power Company, Gulf Power Company, and Mississippi Power Company have used the Warrior-Tombigbee to transport coal to their respective electrical generating. plants at Demopolis, Alabama; Mobile, Alabama; Pensacola, Florida; Sneads, Florida and Biloxi, Mississippi. In 1992, through the use of contracted barge carriers, these companies moved over 5.2 million tons of coal by way of the Warrior-Tombigbee Waterway. Approximately 1.0 million tons of this coal would have required a longer move down the Mississippi River through New Orleans. The Warrior-Tombigbee Waterway allows the barges to move down the Warrior-Tombigbee River to Mobile and other destinations. The significant importance of this capability to our system is obvious from a transportation flexibility standpoint. Additionally, the Port of Mobile is the hub of the Central Gulf Coast and the continued development of its facilities and support services is critical to the economy of the tri-state area served by the Southern electric system.

Alabama Power Company, Gulf Power Company, and Mississippi Power Company utilize water transportation because of the economic advantage to our millions of customers. Any expenditures for maintenance or upgrading which improve the efficiency and reliability of the waterway will have a positive impact on our customers. At the same time, higher cost resulting from inefficiency or the unreliability of the Warrior-Tombigbee Waterway will have a direct and adverse effect upon our customers.

It is imperative that there be a continuous program for maintenance and upgrading of the Warrior-Tombigbee Waterway channels and locks. We support the proposed budget request for $19.0 million in Operations and Maintenance funds for the Black Warrior-Tombigbee River.

Also there are several sites which have involved very difficult negotiations, some of which are now at the point of agreement. To insure that the ongoing channel efficiency work is not delayed, we request additional O&M amounts for the Black Warrior-Tombigbee River and for the Mobile Harbor.

Adequate funding of programs required to maintain the efficiency and reliability of our nation's waterways is critical to its superior economic health and welfare. I strongly urge and solicit your support.

STATEMENT OF THE TENN-TOM TOWING CO.

Dear Senator Johnston, as a member and director of the Warrior-Tombigbee Development Association as well as a regular user of the Warrior-Tombigbee Waterway, we wholeheartedly support the testimony of the President of the Warrior-Tombigbee Development Association, Offa S. Nichols, Jr.

We primarily move petroleum products on the waterway and also operate two petroleum terminals in the Mobile area. Without the continuing operations and maintenance programs performed by the U. S. Corps of Engineers, it would not be possible for the barge industry to continue to provide this country with the most economical and energy efficient mode of transportation available today.

The proposed amount of $19 million for operations and maintenance is necessary to support the day to day Operations and Maintenance Program and to continue ongoing channel improvement projects in the approaches to the bridges at Jackson and Naheola on the Tombigbee River.

The importance of the Mobile Harbor Operation and Maintenance budget cannot be overemphasized. The Harbor serves the State, the Gulf Coast and shipping to and from not only all ports of the United States, but throughout the world. The Harbor needs and must have adequate funds to continue this position.

We appreciate the opportunity of expressing our views on the Warrior-Tombigbee-Warrior Waterway System and the Port of Mobile and want to thank you for your cooperation in the past and continued interest for the future of all waterways in our nation.

STATEMENT OF THE THOMPSON TRACTOR CO., INC.

Dear Senator Johnston, we are pleased to write you again this year in support of the Warrior-Tombigbee Waterway and the Port of Mobile. In our letter last year, we mentioned that our company engaged in over $10,000,000.00 of marine business in Alabama in 1991. During 1992, this business grew to over $11,000,000.00. This is extremely important business for us and, as we have stated previously, the long term reliability and health of the Warrior-Tombigbee Waterway project is critical to our business.

Almost all of our business goes through the Port of Mobile. We project growth in our marine business through the Waterway System and Port to exceed $15,000,000.00 by 1995. You can see that the Port of Mobile and the Waterway System are critical to us, as well as to Mobile and the surrounding communities.

We are in support of the appropriation of $19 million in O&M funds for the Black Warrior-Tombigbee for fiscal year 1994. We feel that these funds are essential to maintain these waterways. In addition, we are in support of the appropriation of adequate O&M funding for Mobile Harbor.

Thank you for your assistance and consideration of these matters.

STATEMENT OF THE CITY OF TUSCALOOSA, AL

Dear Senator Johnston, I am asking that you support the U.S. Army Corps of Engineer's operations and maintenance request for $19 million. The Black Warrior River is an essential component of the industrial base here in Tuscaloosa and West Alabama.

Long-range plans include a channel from the river to our industrial park at the municipal airport. This project will greatly enhance the value of the river to us and it is critical that the river remain navigable and that projects to upgrade the river be funded and completed.

STATEMENT OF U.S. STEEL FAIRFIELD WORKS, ALABAMA

Dear Senator Johnston, USX Corporation operations (both steel and mining) rely heavily upon the availability of Alabama's river systems to transport iron ore, pellets, coal, coke, and finished steel products. Our plans call for movement in excess of 4.0 million tons of these materials per year over the Warrior-Tombigbee waterway system during the coming years. It is for this reason that we offer our support for the Corp of Engineers in their request for operation and maintenance funds for fiscal year 1994. We feel the Warrior-Tombigbee waterway system is vital to the continued growth of Alabama.

We support the action of the Warrior-Tombigbee Development Association in their efforts to assist the Corp of Engineers.

STATEMENT OF DAVID VOLKERT & ASSOCIATES, INC.

Dear Senator Johnston, David Volkert & Associates, Inc. (DV&A) is a large engineering/architectural/planning firm which employs over 300 people and maintains Alabama offices in Birmingham and Mobile.

DV&A strongly supports the fiscal year 1994 Corps of Engineers proposed funding and the appropriation of $19 million in Operations & Maintenance (O&M) funding for the Black Warrior-Tombigbee Waterway System. We also support the appropriation of adequate O&M funds for the Mobile Harbor.

An appropriation of $19 million for the Warrior-Tombigbee Waterway System is necessary to support the day-to-day O&M program, and to continue on-going channel improvement projects in the approaches to the bridges at Jackson and Naheola, both on the Tombigbee River. Also, additional funding is needed to undertake unanticipated surveys required under the Endangered Species Act, and to continue purchasing critical upland disposal sites for dredged materials.

Since the City of Mobile's largest industry is her Port and the City's economy depends upon her Port, DV&A supports funding for O&M for Mobile Harbor.

Confidence in the Waterway and its efficiency and modernization are important in bringing much needed new industry to Mobile. Lower operating costs to users of the Waterway and Port of Mobile are essential in obtaining a reasonable balance of the international export market allowing the U.S. to reduce our trade deficit. Increases in shipping and commerce result in opportunities for many companies, similar to DV&A, to obtain business and offer meaningful employment to citizens of the State of Alabama and other parts of the U.S.

DV&A appreciates this opportunity to express our support of Colonel Nichols, President of the Black Warrior-Tombigbee Development Association, and the testimony to be given by him before the Appropriations Committee of the Senate and House. We are proud to join in the collective effort to improve the efficiency and reliability of the Black Warrior-Tombigbee Waterway and the Port of Mobile.

STATEMENT OF JIM WALTER RESOURCES, INC.

Dear Mr. Johnston, I would like to thank you for the opportunity to make a statement to your Subcommittee. Please accept this letter as my statement.

The Mining Division of Jim Walter Resources, Inc. mines over 9 million clean tons of coal per year. Of that amount, nearly 65 percent of our production is exported. Approximately half of our export production travels down the Warrior River and all of our export production goes through the Port of Mobile. Our payroll for 2,840 employees last year was in excess of $97,000,000 and taxes withheld and/or paid were in excess of $33,000,000. It is obvious from these facts and figures that this Company relies heavily on our waterways and port facilities and that they are of the utmost importance to this Company, its employees and the economy of the State of Alabama.

I strongly support the Corps of Engineers budget request for $19 Million in Operations and Maintenance funds for the Black Warrior-Tombigbee for fiscal year 1994. I also support the appropriation of adequate Operations and Maintenance funds for Mobile Harbor. Our waterways and port facilities provide economic prosperity to Alabama that is worthy of your support. Further, I support the statements and testimony to be given by Mr. Offa S. Nichols, Jr., President of the Warrior-Tombigbee Development Association. I believe that the value of improved efficiency and reliability of the Warrior-Tombigbee Waterway and Port of Mobile cannot and must not be underestimated.

Consequently, I urge you to consider increasing the proposed appropriation for Warrior-Tombigbee Waterway operations and maintenance. The amount currently proposed is inadequate to allow additional capability for ongoing channel deficiency corrections. An appropriation at this level threatens both the efficiency and reliability of our waterways.

The world coal business is at its most competitive level in history. News of any problems, especially transportation and delivery problems, is quickly spread by other coal producers around the world to the buyers to discourage purchases here. A blemish on our delivery record can have devastating, long-term effects from which we might never fully recover. Buyers lost today may never return tomorrow.

Again, thank you for this opportunity to give my comments on this very important matter.

STATEMENT OF WARRIOR & GULF NAVIGATION CO.

Dear Mr. Chairman, I am Nicholas J. Barchie, Jr., President of Warrior & Gulf Navigation Company, and the Chairman of the Warrior-Tombigbee Development Association. Our company is a member of the Warrior-Tombigbee Development Association and wholly supports the testimony to be presented by Mr. Offa Nichols as President of the Association. In the subsequent paragraphs, we wish to address the extreme importance the Warrior-Tombigbee Waterway and the Port of Mobile contribute to the success of our company.

Warrior & Gulf Navigation joins in a collective effort to improve the efficiency and reliability of the Warrior-Tombigbee Waterway system because of its lower costs, energy efficiency, and the major impact it has on domestic and international trade. Low transportation costs via this waterway is imperative to the coal producers, steel producers, farmers and forest products companies in Alabama to maintain competitive prices in the world market in the movement of their coal, grain, steel, logs, wood chips and other products.

Warrior & Gulf is a barge line located in Chickasaw, Alabama and owns 24 towboats and 268 barges making us one of the larger water carriers operating on the BWT system. With our current equipment ownership our annual capacity is approximately 10,000,000 tons. Additionally, we operate one barge dry-dock, a coal handling and iron ore facility at Port Birmingham; one barge dry-dock and one vessel dry-dock at our Chickasaw facilities; and, a wholly owned subsidiary of Warrior & Gulf, Mobile River Terminal, is another bulk terminal handling various bulk cargoes and steel from and to ocean-going vessels in the Port of Mobile. Our total employment is 245 people.

Warrior & Gulf provides barge transportation on the BWT System for export and domestic coal; iron ore; export, import and domestic steel products; export and domestic wood chips; and, several other types of bulk commodities. An efficient and adequately maintained waterway in conjunction with the Port of Mobile is very vital to WGN in our continuing efforts to satisfy our customers competitive requirements. Additionally, we cannot afford to lose sight of the mutual benefits that are realized from continued commitments to private industry connected with the waterway. In order to encourage continued economic development along this great waterway, we must continue our efforts to ensure this viable, low cost transportation alternative remains in place. The continued efficiency of this waterway is extremely critical to the viability of these new industries.

Warrior & Gulf has been operating on the Warrior-Tombigbee Waterway since 1940. During the past five years, WGN's capital investment for new equipment is $21 million in its continual efforts to provide economic water transportation to our customers along this waterway.

Historically, our shoaling problem varies greatly from year to year dependent upon the length of our high water season (December–April) and the amount of flooding that occurs. The amount proposed for Operations & Maintenance is $19 million. For fiscal year 1993 the comparable figure was $18 million, for fiscal year 1992, $18.1 million. This level of funding is necessary to support the day-to-day O&M program, and to continue with the on-going channel improvement projects in the approaches to the bridges at Jackson and Naheola, both on the Black Warrior-Tombigbee River System. The Naheola project will soon be ready for construction and installation of the bank stabilization works. Moreover, additional funding is needed to undertake unanticipated surveys required under the Endangered Species Act, and to continue purchasing critical upland disposal sites for dredge materials. Currently, there are several sites which have involved very difficult negotiations, which are now at the point of agreement, and we need funds to conclude these acquisitions.

In summary, Warrior & Gulf Navigation supports the appropriation of $19 million in O&M funds for the Black Warrior-Tombigbee for fiscal year 1994. Additionally, we support the appropriation of adequate O&M funds for Mobile Harbor.

We respectfully request your continued support and assistance as your subcommittee considers appropriation of funds for these very important issues concerning the Black Warrior-Tombigbee System and Mobile Harbor.

STATEMENT OF DRUMMOND COAL SALES, INC.

Dear Senator Johnston, the Drummond Company, Inc., as the largest coal producer in Alabama, has a vital interest in the continued availability and use of the navigable waterways in Alabama. Our company's growth (and that of many others) and the economic viability of the Southeast has been positively impacted by the Warrior-Tombigbee System and the Port of Mobile. This must continue.

The company's new 4 million ton/year Shoal Creek Mine, operational later this year, will have its principal shipping outlet at Mile Post 372 on the Black Warrior River. The success of this project (one of the newest and largest underground mines in the U.S.); our other existing mines and barge loading facilities now so heavily dependent on water transportation to be competitive; and the numerous associated jobs for Alabamians would be jeopardized absent the availability of an efficient and well maintained waterway system.

As you consider the funding needs of the Corps of Engineers, we strongly urge appropriation of at least $19 million for fiscal year 1994 for the day to day Operation and Maintenance of the Warrior-Tombigbee system and to continue the needed improvements in the approaches to the bridges and Jackson and Naheola. We also support adequate O&M funding for Mobile Harbor.

STATE OF THE AMERICAN COMMERCIAL BARGE LINE CO.

Dear Mr. Johnston, when Appropriations Committees of Congress conduct hearings as to the monies needed to continue Corps of Engineers' capability for construction on our inland waterways system and maintenance, we request your strong support for the Corps' program of waterway development. We believe the continued viability of our interstate transportation infrastructure is one of the most important functions of the Federal Government. It ties the regions of our country together, while it creates new job opportunities for many in regions which are economically deprived.

There are many deserving projects in the total system which must move forward. We totally support the recommendations for new construction priorities which are contained in the Inland Waterways Users Board report recently released. The report evaluates the navigational needs for the entire national system.

Our firm, American Commercial Barge Line Company, moved over 46 billion ton miles of freight in 1992. The main commodities we moved for our customers were coal, grain, liquid products, iron and steel as well as other bulk commodities. Being one of the larger inland waterway companies which operates throughout the entire river and canal system, we can well appreciate the worth of the nation that barging transportation provides to the shippers and the economy.

We believe sufficient funding should be made available to maintain and operate the waterway at a level which will not reduce operational efficiency. We support the amount proposed for the operations and maintenance budget of $19,000,000 in fiscal year 1994 for the Black Warriors-Tombigbee River.

Although our company did not transport a lot of products on the Warrior-Tombigbee waterway in 1992, we do view it as an important artery to the integrated system. Most of the tonnage we did move was iron and steel products and some chemicals, important to the industrial development of the area. In recent past years, we moved a large amount of coal off the river to power plants in Mississippi providing low cost energy to the regional consumers. Due to plant requirements and contractual obligations, we did little in coal movement from the Warrior in 1992; however, we believe we may do more in the future.

In the 1988 drought, when sections of the Mississippi and the Lower Ohio River were shut off for lengthy periods of time, we did move a significant amount of tonnage over the Tennessee-Tombigbee system which was vital in keeping certain plants operating during very critical, national emergency periods.

Other projects which virtually affect our southern region and require acceleration of effort is the planning study for replacement of the Industrial Lock in New Orleans, the need to address the Sargent's Beach erosion problem in Texas before we lose the navigation capability of the Western section of the Gulf Intracoastal Waterway, and the need for a construction funding of the Olmsted Lock and Dam project at the lower end of the Ohio River to replace existing antiquated locks 52 and 53. Although not located in our southern region, over 98 million tons of freight move through this area, most of it originating or terminating in the Gulf Coast area.

We hope the foregoing will be useful in your deliberations. If you require any further information, we will be happy to supply it at any time.

MOBILE, AL, AREA NAVIGATION PROJECTS

STATEMENT OF JOHN L. MCCARRON, JR., CHAIRMAN, PORT AND WATERWAYS TASK FORCE, MOBILE AREA CHAMBER OF COMMERCE

Senator JOHNSTON. Next, we will have the Mobile Area Chamber of Commerce with John L. McCarron, Jr., who is chairman of the Ports and Waterways Task Force.

Mr. MCCARRON. Thank you, Mr. Chairman. I have some support here from the State Dock. So I think they are up next.

This statement is presented on behalf of over 2,450 business members of the Mobile Area Chamber of Commerce in support of the need for fiscal year 1994 budget requirements associated with the waterways project in the Mobile area.

Our Port and Waterways Task Force is comprised of all facets of the maritime community in the Port of Mobile. Members include pilots, tug and towboat operators, shipping agents, shipyards, marine suppliers, stevedores, and terminal operators.

As such, we feel that our task force is very representative of the marine interests in our port area. As such, we would like to go on record as supporting the continued maintenance of our channel to its authorized depth.

There are also other ongoing requirements in our area, such as the completion of the Bayou LeBatre Channel; a very serious situation existing at Dauphin Island, which has been beset by severe erosion. And recently, Congressmen Bevill has been down to look at that. And it is definitely needed in that area.

There is also the ongoing maintenance in the intercoastal waterway, which connects New Orleans and the other ports, both east and west.

Of immense concern, of course, is the Clinton administration's proposal on increased user's fees, barge fuel taxes, and energy taxes. And it is very gratifying to hear you, sir, indicate your thoughts about this.

Our imports and exports are part of a global economy. Increases in cost for U.S. commodities will reduce or stifle businesses associated with our waterways. And, of course, this will result in many lost jobs and a terrible negative impact on our economy.

We cannot have this happen for many reasons and respectfully request that these additional fees and taxes associated with our waterways be rejected. I comment that this is definitely not the way to approach balancing the budget.

Mr. Chairman, we appreciate the opportunity to appear before this committee, and we thank you.

Senator JOHNSTON. Thank you very much, Mr. McCarron.

[The statement follows:]

STATEMENT OF JOHN L. MCCARRON, JR.

This statement is presented on behalf of the over 2,450 business members of the Mobile Area Chamber of Commerce in support of the need for fiscal year 1994 budget requirements associated with the waterways projects in the Mobile Area.

Our Port & Waterways Task Force is comprised of all facets of the maritime community in the Port of Mobile. Members include pilots, tug and towboat operators, shipping agents, shipyards, marine suppliers, stevedores and terminal operators. As such, we feel that our task force is very representative of the marine interests in our port area.

The vital benefits of our port in Mobile are recognized throughout our community and the region, and we are extremely grateful for past efforts and accomplishments of the Corps of Engineers in the Mobile area.

As such, we would like to go on record as supporting the continued maintenance of our channel to its authorized depth. In the past months project depth has been maintained continually allowing for freedom of movement for the vessels requiring that draft. This has not been the case in the past and we must emphasize the necessity to continue to have this capability allowing the port to be viable and competitive.

There are other ongoing requirements in our area such as:

—Completion of the Bayou La Batre channel.

—Addressing and correcting the severe erosion problems at Dauphin Island.

—Ongoing maintenance in the intercoastal waterway in our area.

—Miscellaneous projects such as Dog River, Fowl River and other smaller needed projects in our area.

We have furnished a statement of support to the Warrior-Tombigbee Development Association and the Coosa Alabama River Improvement Association, Inc. and would request that all consideration possible be given to approving the operations and annual maintenance appropriations for fiscal year 1994 Corps budget requests for those projects.

Of immense concern is the Clinton Administration's proposals on increased user fees, barge fuel taxes and energy taxes. What this Committee and many members of Congress must realize and determine is the impact of these proposals. Our imports and exports are part of a global economy and increases in costs for U.S. commodities will reduce or stifle businesses associated with our waterways. This will result in many lost jobs and a terrible negative impact on our economy. We cannot have this happen for many reasons and respectively request that these additional fees and taxes associated with our waterways be rejected. This certainly is not the way to balance the U.S. budget.

Let me thank you for the opportunity to present this statement to the Committee in support of the waterways projects in the Mobile area as stated above. We earnestly solicit your support when the 1994 budget allocations are known. We respectfully request that this statement be included and made a part of the permanent record of these hearings.

MOBILE HARBOR OPERATION AND MAINTENANCE

STATEMENT OF JOHN CAREY, ALABAMA STATE DOCKS

ACCOMPANIED BY MAJ. GEN. A.J. PULLION, ASSISTANT DIRECTOR OF ALABAMA STATE DOCKS

Mr. CAREY. Good afternoon, sir. I am John Carey, representing Mr. John Dutton, the director of the Alabama State Docks.

I have with me Maj. Gen. A.J. Pullion, who is our assistant director.

The Alabama State Docks is pleased to appear before the committee again to request requirement for the Corps of Engineers operating and maintenance funding for the Mobile Harbor project.

We appreciate the hard work this committee has done over the years in ensuring the viability of our port and the inland waterway projects so important to us.

You have heard this afternoon statements from the various Alabama waterway associations requesting the committee's support for their respective waterways. In recognition that the deep-water terminus for these waterways is the Port of Mobile, it is sufficed to say that we strongly support their statements of need.

Correspondingly, we also support the funding of the Gulf Intercoastal Waterway and the Chattahoochee-Apalachicola system.

If I may be so bold as to assume that I may speak for the total Port of Mobile, navigation interests throughout the State of Alabama, and brother deep-water ports around the Nation, let me say that we are extremely nervous as to the future of our industry, both domestically and internationally.

For the past several months, we have been confronted with a continuous stream of news stories challenging the need for our national inland navigation and deep-water port systems. We see and hear reports calling for a fivefold increase in the waterway fuel taxes, the establishment of energy user taxes, increase funding to speed up the listing of some 400 or more endangered species and the identification of their critical habitats, the establishment of rigid international quality control standards, and increasingly severe dredge material handling and disposal criteria.

Each of these challenges have the potential for severe economic and employment impacts, both in our region and throughout our industry.

You earlier alluded to the efficiency and the economics of using the waterways for transportation. I have included in my full statement some facts and figures that I have gathered in that area.

Coming closer to home, why is the Alabama State Docks nervous? We are a marine terminal operator at the Port of Mobile, only one of the many beneficiaries of the project.

LOCAL INFRASTRUCTURE INVESTMENT

We are the local sponsor of record for the project. We do not receive any State or local taxes. Our revenues and, therefore, our ability to serve as the local sponsor for the project is basically—is based solely upon our operational income.

We have built an infrastructure investment over the past 65 years of approximately $600 million. In our capital investment plan, we have initiated a near-term facility expansion of $20-plus million and have identified nearly $100 million of needed rehabilitation and expansion over the next 10 years.

The operation of the State docks alone at the port is responsible, either directly or indirectly, for some 59,000 jobs throughout the State of Alabama.

These figures do not include countless other private industries that channel some of the 35 million tons of products through the port each year, or the rapidly expanding ship repair capacity that firms such as Atlantic Marine and Bender Shipyards are experiencing at Mobile.

Given these numbers, any threat of increased operational cost, either direct or indirect, that could constrain or curtail our ability to compete in the international market is threatening.

When I spoke to you last year, the State docks was intensely involved with the Corps in seeking an improvement in their maintenance of our project.

I am happy to report that through the efforts of the entire Corps of Engineers chain of command, we have had a fully authorized project channel for approximately the last 6 months.

Given that this is the first time in years that our project has been fully operational for more than 30 days at a time, we consider this a significant breakthrough.

It is for these reasons that we are requesting your support in funding the Corps fiscal year 1994 operation and maintenance project for the Mobile Harbor project at approximately the same level as was expended in fiscal year 1992, or approximately $22 million.

We appreciate the opportunity to appear before you today and voice our support of the Corps and their funding requirements for fiscal year 1994.

Senator JOHNSTON. Thank you very much, Mr. Carey. We appreciate you all being here today.

Mr. CAREY. Thank you, sir.

[The statement follows:]

STATEMENT OF JOHN CAREY

Alabama State Docks is again pleased to appear before this Committee to discuss requirements for operating and maintenance funding for Fiscal Year 1994 for the Mobile Harbor Project. We appreciate the hard work this Committee has done through the years in insuring the viability of our port and the inland waterway projects so important to us.

You have heard or will hear in this session statements from the associations of Alabama-Coosa Waterway, the Warrior-Tombigbee Waterway and the Tennessee-Tombigbee Development Council requesting the Committee's support for the Army Corps of Engineers' operation and maintenance budgets for their respective waterways. For the sake of brevity and in recognition that the deep water terminus of these waterways is the Port of Mobile, suffice to say that we strongly support their statements of need. Correspondingly, we also support funding of the Gulf Intercoastal Waterway.

Now, as a departure from our traditional statement requesting support of the Corps of Engineers operation and maintenance budget for the Mobile Harbor Project; and being so bold as to assume that I may speak for the total Port of Mobile, navigation interests throughout the State of Alabama and brother deep water ports around the nation; we are extremely nervous as to the future of our industry both domestically and internationally.

For the past several months, we have been confronted with a continuous stream of news stories challenging the need for our national inland navigation and deep water port systems. We see and hear reports calling for a five-fold increase in waterway fuel taxes, the establishment of energy user taxes, increase funding to speed up the listing of some 400 or more endangered species and the identification of their critical habitat(s), the establishment of rigid international quality control standards and increasingly severe dredge material handling and disposal criteria. We are experiencing ever increasing challenges as to the economic basis for the existence of any water-based transportation system. These challenges all to frequently are being presented by interests who have done little or no homework as to their economic and employment impacts.

Water transportation is the most efficient, safest and environmentally sound mode of transportation. It creates less social disruption and urban transportation distress than highway, rail or air transport. The cost to move one ton of cargo one mile is 2.6 cents by rail, 10 cents by truck, but only 0.7 cents by barge.

Our national deep water ports move approximately 95% of all U. S. exports. It is estimated that U. S. Ports, from cargo activities above, contributed $130 billion in services, generated 1.5 million jobs, contributed $14 billion in federal taxes and added $700 billion to the GDP in 1991. A recent GAO study estimated that the federal agencies collected $2.1 billion in assesments from waterborne trade in FY 92.

Coming closer to home, why is the Alabama State Docks nervous? We are a marine terminal operator at the Port of Mobile, only one of the many beneficiaries of the Mobile Harbor Federal Project. We are the local sponsor of record for the Project. We are not a recipient of any state or local taxes. Our revenues and; therefore, our ability to serve as the local sponsor for the project is based solely upon our operational income.

We have built an infrastructure investment over the past 65 years of approximately $600 million dollars. In our capital investment plan, we have initiated a near term facility expansion of $20+ million and have identified almost $100 million of needed rehabilitation and expansion over the next ten years.

In FY92, and now continuing in FY 93, the Alabama State Docks experienced significant growth, both in tonnage and dollar terms, in the movement of grain, forest products (paper and lumber), bulk ore (ferro silicon, ilmenite and bauxite, etc.) and general cargo (iron, steel, containers, etc.). We did; however, see a drop in the export of coal due to the competitiveness of the international market. This drop may be exacerbated next year as one of our major exporters is faced with the renegotiation of its principle international contract.

The operation of the State Docks alone at the port is responsible, directly or indirectly, for 59,000 jobs in Alabama. These figures do not include countless other private industries that channel some of the 35 million tons of products through the port each year or the rapidily expanding ship repair capacity that firms such as Atlantic Marine and Bender Shipyards are experiencing at Mobile.

Given these numbers, any threat of increased operation costs, either direct or indirect, that could constrain or curtail our ability to compete in the international market is threatening.

When I spoke to you last year, the State Docks was intensely involved with the Corps in seeking an improvement in their maintenance of our Project. I am happy to report that through efforts of the entire Corps chain of command, we have had a fully authorized project channel for approximately the last six months. Given that this is the first time in years that our project has been fully operational for more than thirty days at a time, this has been a great break through.

It is for these reasons that we are requesting your support in funding the Corps FY94 operation and maintenance program for the Mobile Harbor project at approximately the same level as was expended in FY92, $22 million. We also request your continuing support in the deepening of the Port of Bayou La Batre and the maintenance of the Gulf Intercoastal Waterway.

We appreciate the opportunity to appear before this Committee and voice our support of the Corps of Engineers funding requirements for Fiscal year 1994.

Alabama State Docks Department respectfully request that this statement be incorporated in and made a part of the permanent record of proceedings of these hearings.

TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT ACTIVITIES

STATEMENT OF DONALD G. WALDON, ADMINISTRATOR, TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT AUTHORITY, AND PAST CHAIRMAN, WATER RESOURCES CONGRESS

ACCOMPANIED BY:

WALTER STEVENSON, REPRESENTING GOVERNOR HUNT OF ALABAMA

GARY LAGRANGE

Senator JOHNSTON. Finally, we will have the Tennessee-Tombigbee Waterway Development Authority with Donald G. Waldon, who will also speak on behalf of the authority and the Water Resource Congress.

Mr. WALDON. Good afternoon, Mr. Chairman. In the interests of time, I am going to make my remarks very brief.

I have with me Walter Stevenson, who is here representing Governor Guy Hunt of Alabama who is the chairman of the authority. He has a statement that he has entered into the record from the

Governor that not only endorses the Tenn-Tom, but the other projects from Alabama that you heard today.

Contrary to what you may read in the national media, the Tenn-Tom is alive and well and doing very good as far as generating benefits.

It could not have opened at a worst time, economically speaking. However, the commerce has grown every year. In fact, in 1992, we enjoyed a 22-percent increase in commerce, which we think is very commendable.

Senator JOHNSTON. And how does that compare with the projections?

Mr. WALDON. With the exception of exported coal, all of the other commodities are basically on track. We are not meeting the coal exports, but that is no fault of the waterway.

On the other benefits, the recreation and tourism has just been short of phenomenal. We had last year alone over 6 million visitors. A lot of people poo-poo recreation and tourism, but for a lot of those local communities it has really been an economic boon to those small towns along the waterway.

As you well know, waterways induce industrial development. We can point to nearly $2 billion of new and expanded industries that has taken place since the waterway opened.

Senator JOHNSTON. $2 billion?

Mr. WALDON. $2 billion, with a "B." Those are industries where the corporate officials said that the Tenn-Tom was one of the contributing factors for the company making that decision to locate or to expand that plant. Here, again, in light of the economic conditions, we think that is a phenomenal success story.

Senator JOHNSTON. I am glad to hear that. You know, I had the leadership of Tenn-Tom as chairman of this subcommittee and in fighting the battles on behalf of Tenn-Tom back in those key years.

Mr. WALDON. Senator, if it was not for you and your able staff, we would not be here today, frankly. As you recall, one year, I think, we won by two votes. So it got down to——

Senator JOHNSTON. I remember that.

Mr. WALDON [continuing]. That kind of a margin of victory. Let me do say that contrary to what Sam Donaldson, now the world's foremost expert in resources development on "Primetime Live" says, I think that you can expect to see these kinds of benefits occurring in your state when the Red River is finished. So keep pressing on. [Laughter.]

Senator JOHNSTON. This is our last year of funding to get navigation up to Shreveport on the Red River.

Mr. WALDON. Yes, sir; while we are pleased with the progress that the Tenn-Tom has made, like everyone else, we see some dark clouds looming on the horizon.

We, obviously, are very much concerned about the $1 per gallon fuel tax. Attached to my statement is a resolution passed by my four-State compact, which has been sent to all of our congressional delegation.

And I plan on talking to the congressional delegations from Mississippi, Alabama, Tennessee, and Kentucky. And I pretty confident they are as concerned as we are about that, the implications of that tax.

While the Alabama sturgeon, allegedly, does not reside on the Tenn-Tom, the fact that it is on the lower Tombigbee——

Senator JOHNSTON. Well, do not let them import it.

Mr. WALDON. Right. [Laughter.]

But nevertheless, the fact that it would —that it is allegedly on the lower Tombigbee, it would, in essence, shut off the southern access of the Tenn-Tom. So it would, obviously, have a major impact on the waterway.

We very much support what this committee has done in the past, not only on funding the operation and maintenance of the project, but also the mitigation land acquisition. That is coming along real well. And I think right now about two-thirds of that land now has been purchased and is well on track of completing by 1995.

ECONOMIC DEVELOPMENT ACTIVITIES

As you well know, the Tenn-Tom traverses some of the most economically depressed regions of the country. And we think that it would be penny wise and pound foolish for the Federal Government not to fund these regional economic development type agencies, such as ARC and TVA, which has been really a tremendous help to these impoverished counties as far as pulling—allowing them to pull themselves up by their bootstraps.

And we respectfully request that you continue funding TVA and ARC, at least at current levels. Thank you.

Senator JOHNSTON. Thank you very much, Don. It is always good to have you. And I think that completes——

Mr. WALDON. I need to switch hats, Mr. Chairman.

Senator JOHNSTON. Yes.

Mr. WALDON [continuing]. Just for a moment.

I have asked Gary LaGrange, a good friend of mine and a constituent of yours from Franklin, to join me. He is also a past chairman of the Water Resources Congress. Our chairman is ill and could not be here.

Let me just, very briefly, state that we, like all water resources organizations, are concerned about the user fees. We are very much concerned that we need a much more level playing field as far as balancing environmental considerations with economic development.

It just came to my attention this morning that a recent Gallop poll of the congressional members pointed out that as far as concerns go and which are the most critical to the Congress, 77 percent was jobs, by far the most critical one.

The next was the Federal deficit. Very surprisingly, only 5 percent of the concerns were the environment. And I think that if that is the case then, obviously, we need to get back in balance as far as the adverse impacts a lot of these regulations are having and things like that on job creation.

We were, of course, very supportive of the President's economic stimulus program, but we were very surprised, if not somewhat disappointed, that very little of that stimulus package involved the Corps of Engineers and the Bureau of Reclamation Program; I think something like less than $100 out of $16 billion.

We feel that one of the best ways to stimulate the economy and create jobs is to accelerate the construction of projects that you, this committee, has already approved. They have passed the litmus test, as far as being economically justifiable.

And they do—they are labor intensive, most of them. But at the same time, by accelerating the construction of these projects, you complete them in a shorter period of time. Therefore, you reduce the total cost that is involved in them.

But probably more importantly is you would bring these projects on line and begin to generate the benefits that they are intended to.

So we are hoping that in consideration of that plus the regular appropriations, that more considerations can be given to accelerating some of the water resources development programs.

Thank you.

Senator JOHNSTON. OK. Thank you very much, Don.

Mr. WALDON. Thank you, sir.

Senator JOHNSTON. I am glad to see Gary LaGrange in the back.

[The statements follow:]

STATEMENT OF DONALD G. WALDON, ADMINISTRATOR, TENNESSEE-TOMBIGBEE WATERWAY DEVELOPMENT AUTHORITY

Mr. Chairman, as always, it is an honor to appear before you and other distinguished members of this Committee.

The Authority and all the citizens in our four-state region remain indebted to you and this Committee for the support you gave to make the Tennessee-Tombigbee a reality. Without this Committee's support, our region and the nation would not be enjoying the myriad of economic benefits the waterway is now generating.

The waterway could not have opened at a more difficult time when it was completed in 1985. Since then heavy manufacturing, coal, and grain exports, the primary users of waterways, have been and continue to be affected by a world-wide economic recession.

Even in the face of this economic downturn, 1992 was a good year for Tenn-Tom. Commerce has grown each year on the Tenn-Tom. The waterway experienced a 22 percent increase in tonnage last year, alone.

Other economic benefits generated by this project are even more impressive. Recreation and tourism have surpassed everyone's expectations. The waterway's environmental and recreational attractions drew over 6 million visitors in 1992, alone. These activities have had a profound impact on the economy of many of the small communities along the waterway.

The Tenn-Tom Waterway Corridor is one of the most economically depressed regions in the Nation. The waterway has helped attract nearly $2 billion of new and expanded industrial development to this impoverished area. These new industries have not only created new jobs but have also greatly expanded markets for the region's resources.

For example, 3 million tons of forestry products, valued at more than $70 million, were transported on the Tenn-Tom in 1992, alone. Most, if not all, of these products would not have been marketable without low cost barge transportation. State officials in Alabama and Mississippi attribute the Tenn-Tom as one of the principal factors for recent record production levels by the forestry industry in these two states.

While we are very pleased with the progress made by the Tenn-Tom since it opened, we see some very dark and ominous clouds on the horizon that could cripple or kill the economic advancements the waterway has fostered.

The proposed $1.00 per gallon fuel tax on waterway users recommended by the Clinton Administration would be the death knell of Tenn-Tom and the Nation's inland waterway system as we know it today. This 500 percent increase in taxation is both inequitable and ill-conceived. Attached to my prepared statement is a resolution adopted recently by the Tenn-Tom Authority's Board of Directors that represent Alabama, Mississippi, Kentucky and Tennessee interests in the waterway. We ask this Committee's support and influence to kill this absurd tax.

Mr. Chairman, you have already heard from others this morning concerning the implications of designating the Alabama Sturgeon for protection under the Endangered Species Act. We also view this proposed Federal action as a serious threat to continued use of the Tenn-Tom for commercial transportation. It could effectively close the waterway's southern access.

Unfortunately, adverse economic impacts of actions taken by the Endangered Species Act are not allowable in the decision making process.

In the case of the Alabama Sturgeon, the potential losses to the regional and national economy are staggering. Moreover, the scientific data that U. S. Fish and Wildlife Service is using to justify such protection for fish is tenuous at best. There is no firm evidence of the fish's existence.

Operation and maintenance funding for Tenn-Tom has been held at a constant level for the past few years. The Corps of Engineers have done an excellent job of maintaining the waterway within the budgetary constraints even though demands for increased funds have continued to rise. For example most all of the recreational development approved for Tenn-Tom have now progressed from construction to the maintenance stage, placing more demands on available O&M funds.

In addition, the acquisition of lands for wildlife mitigation has progressed very well thanks to this Committee's funding support. At the end of this fiscal year, about 51,000 acres or about two-thirds of the total land authorized to be acquired will have been bought. Administrative and operation costs associated with these purchased lands have also significantly increased O&M funding requirements.

We, therefore, respectfully request that the Committee approve an appropriation of $20 million for the operation and maintenance activities of Tenn-Tom in fiscal year 1994. We also request that $10 million also be appropriated to continue acquisition of the mitigation lands.

As I mentioned earlier, the Tenn-Tom Waterway corridor contains some of the most economically deprived counties in the Nation. The largest industry or source of income for some of these counties is government transfer payments. It, therefore, would be "penny wise and pound foolish" for the Federal government not to adequately fund regional economic development programs, such as those administered by TVA and ARC, that have a proven track record of helping these impoverished counties pull themselves up by their bootstraps.

We strongly recommend that ARC and TVA be funded in fiscal year 1994 at a level at least commensurate with current funding.

Thank you again for the opportunity for the Authority to present our views and recommendations for your consideration.

RESOLUTION OPPOSING NEW WATERWAY FUEL TAX

Whereas, The Tennessee-Tombigbee waterway Development Authority is an interstate compact comprised of the States of Alabama, Kentucky, Mississippi and Tennessee, and,

Whereas, This multi-state agency represents the public and private interests in the development of the Tennessee-Tombigbee Waterway and its commercial and trade potential, and,

Whereas, The Tennessee-Tombigbee Waterway, completed in 1985, is the newest link in the nation's 25,000 miles of inland waterway system, and,

Whereas, waterways contribute greatly to the U.S. economy by shipping some 13 percent of all intercity commerce for only 2 percent of total freight costs, by expanding domestic and foreign markets and by inducing industrial growth, and,

Whereas, Barge transportation is also the most energy efficient and the most environmentally safe mode for moving certain commodities such as petroleum and chemicals, and,

Whereas, The Clinton Economic Plan recommends a user fee or fuel tax of $1.00 per gallon to recoup the federal costs of operating and maintaining the Nation's waterways, in addition to the current user tax that will reach 20 cents per gallon by 1995, and a proposed energy tax on B.T.U. consumption by the Administration that will affect all energy users, and,

Whereas, These proposals, if enacted, will raise total waterway user taxes to $1.29 per gallon resulting in skyrocketing transportation rates that will drive commerce off the rivers, and,

Whereas, this inequitable level of taxation will shut down this vital transportation system and create enormous business losses to American industry, farmers, coal and other producers, and jeopardize billions of dollars of private and public investments dependent upon waterways, now,

Therefore be it resolved, That the Tennessee-Tombigbee Waterway Development Authority strongly opposes the approval of the proposed $1.00 per gallon user fee because of its inequity and resultant losses to local, regional and national economies, and,

Be it further resolved, That a copy of this resolution be spread upon the minutes of the Tennessee-Tombigbee Waterway Development Authority, and, *Be it further resolved,* that copies of this document be presented to the members of the U.S. Congress and other appropriate officials.

Done this 27th day of February in the year of our Lord Nineteen Hundred and Ninety-Three.

GUY HUNT,
Governor.
DONALD G. WALDON,
Administrator.

STATEMENT OF DONALD G. WALDON, PAST CHAIRMAN, WATER RESOURCES CONGRESS

Mr. Chairman, my name is Don Waldon. I am Past Chairman of the Water Resources Congress. The current Chairman of WRC, Richard Fenske of North Dakota, is ill and expresses his regrets that he is unable to be here.

It is, therefore, my pleasure to represent the members of WRC today and I appreciate the opportunity to do so.

As you know, WRC has appeared before this distinguished committee each year for many years. It is the Nation's oldest water resources trade association. We celebrated our 100th anniversary two years ago.

The visionary actions of this committee and the Congress have resulted in a network of flood control measures, an inland waterway system, and water supply sources that have improved our standard of living to unparalleled levels compared to the rest of the world. These wise investments in our infrastructure have benefited Americans in every region of this great country.

However, much remains to be done if we are to sustain our present quality of life. Many water resource projects are over 50 years old and are approaching the end of their structural and economic lives. Disastrous losses both economic and in human lives, continue to take its toll on the Nation in terms of floods, droughts and other acts of nature. Many regions are experiencing for the first time shortages of water because of population increases and other competing demands on available supplies. These water rights conflicts are pitting states and regions against each other where such problems never existed.

Notwithstanding these apparent if not obvious needs for increased investments in water resource development, Federal spending for this program remains a low priority. Although this program is one of the very few Federal expenditures that actually result in a long term return on the investment by generating economic benefits for 50 to 100 years, funding for water resource development amounts to only 1 percent of the total Federal budget. This is a travesty.

We were very disappointed to learn that the President's economic stimulus package contained only a pittance of funding for water resources compared to the total funding requested. We support the President's initiative but believe that increased funding of those water projects now under construction should be given greater consideration. Accelerated funding of these projects will not only generate immediate job opportunities, it will enable these projects to be completed earlier, saving costs and enabling the projects to begin generating benefits earlier.

By increasing the funding for these programs under this Committee's jurisdiction, the Nation not only benefits from the creation of new jobs but it will realize the long term benefits from these investments in this important part of our infrastructure.

Generally speaking, we support all the projects that you have previously approved for funding that will be included in next year's appropriation. They have been subjected to rigorous economic feasibility standards that you require for water projects prior to your approval. In addition, I have a list of specific projects which are very important to some of WRC's members that I would like to submit to the Committee as part of my prepared statement. We request your special consideration for these projects.

Mr. Chairman, you and the other distinguished members of this Committee are to be commended for allowing public witnesses such as WRC, to meet with you each year. We realize it is a time consuming and arduous procedure but one that is important to all of us interested in the development and wise use of our water resources.

Thank you.

SPECIFIC PROJECTS RECOMMENDED FOR CONSIDERATION

Garrison Diversion Unit, ND.—This project has long been on WRC's list of high priority projects. It is recommended that this project be funded at the full construction capability of the Bureau of Reclamation for this project. Earlier completion of this project will fulfill a long overdue promise made to the citizens of North Dakota when the Pick-Sloan project was built many years ago.

Shoreline protection of certain flood control projects on the Mississippi and Iowa Rivers.—WRC recommends that $200,000 be appropriated to initiate a reconnaissance survey for protection of existing flood control measures in the upper Mississippi River Basin as described in Docket 2406 adopted by the U.S. House Committee on Public Works and Transportation.

Montgomery Point Lock and Dam, AR.—It is requested that $7 million be appropriated to completed A/E design work and purchase lands for construction of this new lock and dam. Early completion of this project is essential to continued commercial use of the McClellan-Kerr, Arkansas River Navigation System.

Operation and maintenance of the Nation's inland waterway system.—Past budgetary constraints have resulted in inadequate funding levels for O&M of completed inland navigation projects resulting in deferral of essential maintenance needs. To prevent further deterioration of the structural integrity of these projects, additional funding is required for many of these projects. WRC is pleased to note that some of these projects have been included in the proposed $76 million of Corps O&M funding that is part of the President's economic stimulus package.

Louisa Bridge replacement, Gulf Intracoastal Waterway, LA.—It is requested that $5 million be appropriated to complete replacement of this existing bridge with a modern bascule structure. The remaining $25 million of the bridge cost have previously been funded, partially as an ICE TEA Demonstration grant. Completion of the new bridge will eliminate a serious hazard to navigation on the Gulf Intracoastal Waterway and eliminate a constraint to economic development of this region.

Kentucky Lock, Tennessee River, KY.—Regrettably, the new lock proposed at Kentucky Dam was not included in last year's Water Resource Development Act although completed feasibility studies demonstrated a need—and economic justification for the project. It is recommended that $600,000 be appropriated to continue preconstruction planning on this project during fiscal year 1994.

STATEMENT OF GOV. GUY HUNT OF ALABAMA

Thank you, for allowing the State of Alabama the opportunity to provide our views to the Subcommittee on Appropriations for Energy and Water Development for the Federal water resource activities and projects in Alabama. I join with the Tennessee-Tombigbee Waterway Development Authority, the Warrior-Tombigbee Development Association, the Coosa-Alabama River Improvement Association, the Tri-Rivers Waterway Development Association, the Tennessee River Valley Association and others in support of the several Federal water resource projects in Alabama.

Alabama is blessed with extensive water resources which lend themselves to development and use for the benefit of our citizens. Water resource developments in Alabama include: the deep harbor and extensive port facilities at the Port of Mobile, provides export opportunities for the nation's products; the Tennessee-Tombigbee Waterway provides an important connecting link to the inland waterway system and the heartland of our nation; the Tennessee River waterway provides a vital transportation link in the Tennessee River Valley of Alabama; the Warrior-Tombigbee Rivers waterway provides opportunities to market our coal for domestic use and export, and serves the industrial center of Birmingham; the Alabama River and the Chattahoochee River waterways provide the opportunity for development, transportation of natural resources, agricultural and forest products; and the Gulf Intracoastal Waterway provides a protected waterway link to the ports of the Gulf of Mexico and the inland waterway system. All of the waterways in Alabama are integral parts of our national inland waterway transportation system. They provide for the economical and safe movement of commerce for the benefit of the nation as a whole.

This year, we are in somewhat of a dilemma by not having the President's funding proposal nor the insight of the Army Corps of Engineers estimate of requirements for water resource activities and projects before providing comments to the Subcommittee. I respectfully request the Federal funds necessary to provide for the maintenance and full time operation of the Federal water resource facilities and projects in Alabama. Continued Federal support is necessary to ensure that these important projects continue as viable projects and wise investments. The Federal water resource projects in Alabama can and will help the nation in regaining its economic strength, in reaching its potential for the benefit of all, and in meeting the challenges and opportunities of the future.

Last year I reported to the Subcommittee on the implementation in Alabama of my Executive Order Number 44. This Executive Order established, as an interim measure, an Office of Water Resources within the Alabama Department of Economic and Community Affairs. This office is to address state, regional and national water resource issues and developments. This interim step was taken as we developed and pursued state legislation as a permanent solution and mechanism. I am most pleased to report to you, the recent enactment of the "Alabama Water Resources Act." This statute which I signed on February 23, 1993, establishes the Office of Water Resources as a permanent entity of the State of Alabama. The Office of Water Resources will serve as the primary focal point in Alabama for water resource planning, coordination, development and management for all levels of government, including the Federal government. With the enactment of this statute, Alabama is clearly showing our concern about our finite water resources and our willingness to participate as full partners in the future of its use, conservation, development and management.

I also reported to the Subcommittee last year on the Memorandum of Agreement (MOA), which was signed January 3, 1992, between the states of Alabama, Florida, and Georgia and the Army Corps of Engineers concerning interstate water resource issues in the Alabama-Coosa-Tallapoosa (ACT) and the Apalachicola-Chattahoochee-Flint (ACF) river basins. This MOA temporarily sets aside the interstate dispute between the parties, while we jointly participate in the ACT/ACF Comprehensive Water Resources Study, as full and equal partners, to determine the availability, current use, future demand and an appropriate management structure for these interstate water resources. The Comprehensive Study is underway. However, there is a tremendous job ahead for all of the partners in this endeavor. We in Alabama are committed to a timely completion of this study and to participate and provide support to the study within our capability.

I want to thank you and the Subcommittee for providing the Federal funding necessary to begin this Comprehensive Study. To continue the Comprehensive Study, I am requesting you to support the same level of funding for the new fiscal year beginning October 1, 1993, as in the current fiscal year.

Lastly, I am very concerned about several emerging issues which threaten the Federal, state, local and private investment in our water resource developments. Proposals to list certain subspecies as endangered and the proposal for a 500 percent increase in fuel tax for commercial tow boats could render a fatal blow to our water resource investments for navigation and other purposes, affecting the nation and the region. I request your full attention and careful review of these issues and their potential impact to our water resource investments.

I thank you and the Subcommittee for your continued support of the Federal water resource projects and activities in Alabama and the nation.

SUBCOMMITTEE RECESS

Senator JOHNSTON. That completes our schedule today. We will stand in recess until 9 a.m. tomorrow.

[Whereupon, at 3 p.m., Monday, March 29, the subcommittee was recessed, to reconvene at 9 a.m., Tuesday, March 30.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1994

TUESDAY, MARCH 30, 1993

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:03 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Mark O. Hatfield presiding.

Present: Senators Hatfield, DeConcini, Kerrey, and Gorton.

NONDEPARTMENTAL WITNESSES

OPENING REMARKS

Senator HATFIELD [presiding]. The subcommittee will come to order. I want to welcome the witnesses here today. We have a large number of witnesses who wish to be heard.

Therefore, in accordance with our notification to each of the witnesses, it will take some self-restraint on the part of everyone to hold oral testimony to a minimum in order that all of you who have requested an opportunity to testify may be heard.

I ask that the detailed prepared statements that each of you has worked out be submitted for the record where they will be reviewed. If each of the witnesses will then summarize or highlight the important points in his or her oral testimony it would be most helpful.

OREGON WATER RESOURCE PROJECTS

PREPARED STATEMENT OF GOVERNOR ROBERTS OF OREGON

Again, I welcome each of you here this morning. We will place in the record a statement by Governor Roberts of Oregon. We had expected that Mr. Donald G. Mann, who is in the Oregon Economic Development Department, would be here to represent her, but he has been unavoidably delayed. So, we will incorporate Governor Roberts' full statement in the record at this point.

[The statement follows:]

STATEMENT OF GOV. BARBARA ROBERTS OF OREGON

I appreciate the opportunity to submit my views on the Corps of Engineers programs for fiscal year 1994 as they impact Oregon ports and port communities. Because the actual fiscal year 1994 budget has not been submitted by the President, I request permission to submit comments on specifics within the Corps budget after details are released.

Without the fiscal year 1994 budget on which to comment, I will focus instead on a few specific items, and then close with a restatement of the importance of our smaller ports and the communities they serve. I can tell you that nowhere in this nation is more attention paid to the Corps budget than in the port communities of Oregon!

MINIMUM DREDGE FLEET

My state benefits from the Corps dredges which have served it well. The *Essayons* and the *Yaquina* should not be sacrificed as part of an effort to phase out the Corps minimum fleet. Merely because the private dredge industry overbuilt in years past (an unwise business decision), private dredgers should not now claim they need more and more government operation and maintenance (O&M) work. The current system already guarantees most of the work to the private dredge fleet, and the Corps dredges can continue to serve a useful purpose. Without the Corps fleet, we think dredging costs will climb when this competition is lost. In our state, these dredges have provided critical and timely service to the many ports of Oregon. In emergencies, they have responded quickly, ready to work.

I suggest that the amount of added work earmarked for the private fleet (7.5 million cubic yards set aside in fiscal year 1993) be reduced in fiscal year 1994. The Corps fleet needs this yardage to help keep its cost-per-yard rates from being bumped up by this new restraint on their yardage.

CHANNEL DEEPENING PLANNING FUNDS

The Lower Columbia channel project, the Coos Bay channel, and the Coquille River channel as well as the Yaquina Breakwater project, currently are in the planning process. Each one is critical to the economic well-being of our state. International trade, as well as domestic cargo, is critical to Oregon. Total value of import/export commodities for Oregon, including all waterborne commerce movements on the Lower Columbia River system was approximately $12 billion in 1992. In addition to this, Oregon's total commercial fish and harvest landing values in 1992 were in excess of $73 million (*x*-vessel value).

Local project sponsors also express concern over their inability to control escalating costs of feasibility studies. In some cases, we know nothing can be done by either the local sponsor or the Corps about such costs. It is important that the Corps keeps in mind, however, that whenever local cost-shares are revised upward, it becomes more and more difficult for local sponsors to keep reaching into their pockets for their match. When I talk with port officials involved with the Lower Columbia River channel and the Coos Bay channel projects, I hear about this, along with their frustration with delays.

Continuing authority program

Over the years, the Continuing Authority Program of the Corps has been used by the Corps on several projects in Oregon. I urge that this program be continued. I recall that there were plans announced to cancel this program a few years ago, and I applaud the work of this panel in seeing that funds were provided and the program continued. This program emphasizes the needs of the smaller communities trying to accomplish smaller Corps projects. It cuts down on the costs and delays while keeping important environmental safeguards. Section 107 and Section 111 programs work in Oregon. Port communities in Oregon have developed needed improvements under this authority.

Inland waterway fuel tax increase

Wheat farmers of Eastern Oregon must not see their export markets eroded by increasing the fuel tax some 525 percent! The recent Senate vote of 88 to 12 supporting the Harkin Amendment recognizes that this was an unwise initiative. Some port advocates worry that successful imposition of total O&M costs on one user of the inland waterway system (on carriers of goods into world markets) could well lead to plans to impose total O&M costs on local ports and harbors as well.

Full funding for port operation and maintenance dredging budgets

I urge the panel to fund Corps O&M dredge work at its full capacity to absorb and use those funds wisely. O&M work is a critical part of the equation, and we must not fall farther behind in meeting the needs of our ports and their channel infrastructure demands. Without adequate O&M Corps funding, the outlook for Oregon's smaller coastal ports would be bleak!

Ports are part of this country's infrastructure

Although it is not news to you on this panel, I want to repeat at every available opportunity that ports are an important part of this nation's infrastructure. They also are a critical part of our transportation system. Low-cost water transportation is an important ingredient in keeping U.S. products competitive in world markets. When the discussions in Congress turn to infrastructure, we need to speak with one voice and urge all policy makers in Washington to think "ports" when they think of rebuilding the nation's economy.

Smaller ports in their communities

Some members of Congress, whose districts do not include ports, may not understand the important roles our smaller ports play in the lives of their communities. Simply put: ports often are the principle motivator for economic development in these towns. In some communities, ports may be the only economic development option. Whether it be ports along the Columbia River or ports along our coast, all of these communities have faced some uncertain times in the past decade. Yet the commitment remains to maximize the economic development opportunities which their ports can provide. Port commissioners and port managers work together on a variety of economic and environmental programs and issues. They work together in search of new markets and businesses to help our state enter the 21st Century.

Thank you to the Appropriations Subcommittee and the Oregon Delegation for Supporting Oregon Ports. You on this subcommittee need not be told by any witness about the importance of ports. Your service to this country in seeing that ports meet the challenges of the 1990s and the decades ahead is well known in my state. I am proud of the work that Senator Mark Hatfield has done for our state's ports for over 25 years. His leadership has led to many critical port improvements throughout the state. Congressman Peter DeFazio has worked very hard for Oregon ports inside and outside his district. I look forward to equally strong contributions from the new member of Congress from our First District, Elizabeth Furse. Senator Packwood and Congressman Kopetski, as members of the tax-writing committees, both know that our state thrives from its growing involvement with international trade. Bob Smith's district is where most of our state's agricultural exports are grown, and he has spoken may times of the critical importance of agriculture export markets. Ron Wyden's district includes our state's biggest port, the Port of Portland; and he has pursued various innovations to promote Oregon exports.

In closing, I repeat my thanks to the panel for your commitment to the ports this nation. We in Oregon have enjoyed the partnership we have developed with this subcommittee and its counterpart in the other body. We want that partnership to continue.

Thank you for the opportunity to submit my views on these important issues. will contact you again after actual submission of the fiscal year 1994 budget.

OREGON SMALL COASTAL PORTS MAINTENANCE DREDGING

STATEMENT OF WILBUR E. TERNYIK, COMMISSIONER, PORT OF SIUSLAW, OR; AND CHAIRMAN, OREGON COASTAL PORTS MAINTENANCE DREDGING COMMITTEE

ACCOMPANIED BY:

GINNA MILFORD, TILLAMOOK COUNTY COMMISSIONER, OREGON
DORIS SHELDON, COMMISSIONER, PORT OF GARIBALDI, OR

Senator HATFIELD. At this time, I would ask Wilbur E. Ternyik, representing the Port of Siuslaw if he will come forward and present his testimony.

I would also like to observe that I realize the witnesses are under extreme difficulty in presenting their testimony this morning because we have not yet received the President's budget. Consequently, a summary or an analysis of the impact of that budget on your respective project is nearly impossible.

We are hopeful that the Congress will receive the President's 1994 budget on April 8, I believe is the current date. So, with that proviso, I want to welcome you, Mr. Ternyik, and if you will introduce those with you, you may proceed to give your testimony.

Mr. TERNYIK. Thank you, Mr. Chairman. First of all, I would like to thank you once again for being able to testify here. Last year, I was not quite sure about things when I was here, but things are a little better now.

I want to introduce the people at the table with me. This is Ginna Milford, county commissioner for Tillamook County, and Doris Sheldon who is the port commissioner for the Port of Garibaldi. And in the back of the room we also have Don Bacon, the manager of the Port of Garibaldi, and the most important person of all, my wife, Joyce Ternyik.

The testimony this year as you indicated, is presented without knowing the final budget request numbers for 1994. So, it is a little difficult. However, we feel at this time that it is even more critical that we have adequate maintenance dredging at our small coastal ports. I would like to summarize some of the testimony that I have, and not go into detail on all of the items, and have the rest of it included in the record.

IMPORTANCE OF ADEQUATE CHANNEL DEPTHS

The importance of maintaining the O&M budget at current or higher levels is an even more critical concern at this time. Currently, the economy of Oregon is reeling under a crisis from national events the locals cannot control.

Environmental concerns for the spotted owl and other species has shut down our major timber industry, with the loss of thousands of jobs.

A combination of factors have decimated our once-thriving ocean salmon fishing industry to the point where environmental lawsuits may shut our public fisheries entirely.

The proposed inland waterway user fees increases threatens the existence of the Columbia upriver agriculture economy.

And if I may just get away from that just a second, Senator, the small coastal ports at times are viewed by some as competition with the Columbia River ports. That is the farthest thing from the truth. We definitely support the Port of Portland. The Pacific Northwest waterways and the Columbia River navigation projects are all important to the small coastal ports. Without that economy, we would not be in existence. So, we need to support them and we do.

Another major impact to our economy is the proposed BTU energy tax. We have no idea what impact that may have in our region of the country.

It is, therefore, our belief that the economic contribution of every port in Oregon is vital. Our ability to contribute to the national economy depends on adequate and timely dredging of our navigation channels.

CORPS MINIMUM DREDGE FLEET

We also would like to reiterate our strong support for continued operation of the Corps of Engineers hopper dredges *Yaquina*, *Essayons*, and *Sandwick*. These vessels are vital to maintaining navigation channels at our coastal ports, channels, and harbors.

We commend the Portland District Corps of Engineers staff for their flexible schedule of those dredges. Their ability to maintain our regular dredging and still maintain instant response to emergency situations is essential.

We strongly oppose any reductions in their operational schedules given the unique shoaling problems experienced along our coast and the unavailability of private and contractor dredges. There is simply no other capability that can provide the vital service with timely emergency responses and still remain cost effective. Our ports would soon be out of business without this capability.

CONTINUING AUTHORITIES PROGRAMS

We also voice our support for the continuance of Corps of Engineers' continuing authorities program. We still have many, many small projects that need to be funded on an emergency basis to take care of small problems.

I guess our final statement here, we believe that the current way that Congress addresses our needs and examines them is thorough and fair and we would hope that that would continue into the future.

I guess one other thing I would like to say, Senator, is that this testimony is by far the shakiest testimony you are ever going to get in this hearing. When I wrote this testimony at 5:30 a.m. last week, I was almost shaken out of the chair by an earthquake. I began to wonder if maybe I should not have gotten up that early, but it was an experience.

That is all I have to say, thank you.

[The statement follows:]

STATEMENT OF WILBUR E. TERNYIK

Mr. Chairman:

My name is Wilbur E. Ternyik. I am a Commissioner at the Port of Siuslaw, Oregon and Chairman of the Oregon Coastal Ports Maintenance Dredging Committee established by the Oregon Coastal Zone Management Association, Inc. (OCZMA). OCZMA is an association of forty-one units of local government, consisting of the seven coastal counties, soil and water conservation districts, cities and ports. Other coastal ports representatives and county commissioner representatives from Oregon are also in attendance and are offering testimony on these issues so vital to our coastal economy.

For the first time we are testifying on a Corps of Engineers O&M budget for FY 1994 that has not yet been released. In past years the Portland District budget has averaged about $12 million for Oregon Coastal Ports and $17 million for the Columbia River ports. This bare bones budget level has provided for adequate channel clearing and sediment removal necessary to maintain authorized minimum depth of our water transportation system. It is our unanimous opinion that any reductions below the FY 1993 Corps of Engineers O&M budget would adversely impact the navigability of our ports.

The importance of maintaining the O&M budget at current or better levels is even of more critical concern at this time. Currently, the economy of Oregon is reeling under a crisis from national events that local government cannot control.

- Environmental concerns for the spotted owl and other species has all but shut down our timber industry with the loss of thousands of jobs
- A combination of factors have decimated our once thriving ocean salmon fishing industry to the point where environmental initiated lawsuits may shut out our public fisheries entirely.
- The proposed Inland Waterway User Fee increases threatens the existence of our Columbia upriver agricultural economy.
- The undetermined impacts of the proposed BTU energy tax on Pacific Northwest businesses and industries.

It is therefore our belief that the economic contributions of every port in Oregon is vital. Our ability to contribute to the national economy depends on the adequate and timely dredging of our navigation channels.

We also would like to reiterate our strong support for the continued operation of the Corps of Engineers hopper dredges, Yaquina, Essayons and Sandwick. These vessels are vital to maintaining navigation of our coastal ports channels and harbors. We commend the Portland District Corps of Engineers staff for their flexible schedule of those dredges. Their ability to maintain our regular dredging and still maintain instant response to emergency situations is essential. We strongly oppose any reductions in their operational schedules given the unique shoaling problems experienced along out coast and the unavailability of private contractor dredges. There simply is no other capability that can provide this vital service with timely emergency response and still remain cost effective. Our ports would soon be out of business without this capability.

We also wish to convey our united strong support for the continuance of the Corps of Engineers Continuing Authorities Program. This program has been a vital factor in accomplishing a variety of small project needed in all ports, especially through Section 107 and Section 111 of the Rivers and Harbors Act. These programs need to be reauthorized and fully appropriated to continue the planning and technical assistance needed for our ports' waterway and navigation improvements.

The Oregon Coastal Ports Maintenance Dredging Committee, comprised of Oregon's fifteen coastal ports, continues to meet. We, along with the Port of Ilwaco, Washington continue to explore ways to assist the Corps of Engineers in accomplishing their difficult task. We are also submitting for your consideration the latest update of our "Navigation and Other Activities on Coastal Waterways and Harbors in Oregon and the Columbia River." This cooperative effort started at the suggestion of Senator Mark Hatfield and has resulted in a unified stand on federal and state proposals impacting our port operations.

Once again, we emphasize our sincere appreciation for this Committee's careful scrutiny of our budget request for federal funding that allows the coastal ports of Oregon and the Columbia River to realize the benefits that are derived as a result of earlier channel and jetty improvement projects approved by this Committee. With your assistance, we will continue to meet the cost-benefits of our projects and our hard working citizens will contribute to the local and national economy. We still firmly believe that the current system Congress uses to examine and fund those needed coastal and Columbia River projects is working well and should be continued in the future.

Finally, we ask that the public comment period be left open until the Corps of Engineers budget is released so that we can add further testimony on this most important issue.

This additional testimony is in response to the now announced Portland Corps of Engineers Fiscal 1994 Operation and Maintenance (O&M) Coastal Ports Dredging Budget Request and answers to questions you posed at the hearing on March 30, 1993 pertaining to the Corps of Engineers (COE) Continuing Authority Program and the COE Minimum Dredge Fleet Activities in the Portland District of the COE.

As Chairman of the Oregon Coastal Ports Maintenance Dredging Committee, I contacted all Oregon ports plus the Port of Ilwaco, Washington after receipt of the COE projected Fiscal 1994 dredging budget and schedule. With only two exceptions, the Port of Ilwaco and Depoe Bay, the funds—although slightly changed—appear to be adequate and we do support the COE request.

In the case of the Port of Ilwaco, the dredging project estimated at $300,000 is a low priority project for FY 1993. If it is not accomplished in FY 1993, it must be done for FY 1994. In view of the recent Pacific Fishery Management Council hearings and recommendations for the Pacific Ocean offshore salmon seasons during fiscal 1993, we will see a continual pattern of substantial salmon occur off of the Columbia River entrance. This coupled with drastic reductions of the catch allotments for the mid and south coast will concentrate a heavy increase in both recreational and commercial salmon fishing vessels using the Columbia River entrance. The Port of Ilwaco is one of the main facilities serving this fleet. It is therefore our opinion that for reasons of adequate navigation and safety those funds be added to the COE Portland District Fiscal 1994 O&M Dredging Budget.

It is our understanding that problems involving the Depoe Bay, Oregon harbor are being resolved. Your question to me about possible coastal perceptions that the COE was in some cases dragging its feet in processing Continuing Authority Section 107 projects was also posed to all coastal ports. A list of current projects is enclosed for your staff's review. It is safe to state that in the cases of the Port of Bandon, Port of Umpqua, and City of Florence lower Siuslaw River, those projects are viewed by the sponsors as exceedingly slow. Numerous studies-on-top-of-studies have caused long delays with escalating local share costs. This clearly by some of those involved has led to the firm belief of COE feet dragging. However, as I stated at the March 23, 1993 hearing, we are not fully aware of the constraints the Portland District of the Corps works under when processing those projects. The perception here is that we continue every year to support reauthorization of the Continuing Authority Program as the most efficient cost-saving way for the U.S. government to handle those projects. However, in some cases the progress is very slow and perhaps the review process needs to have some time limits or increased funding levels. Congressman DeFazio's has additional information on this problem.

Regarding the COE minimum fleet, we consider this to be a serious threat to the small Coastal ports existence. The federal government with the help of this Committee has invested hundreds of millions of dollars in our coastal ports authorized projects. The ports, cities, counties and private industry have invested additional millions in support facilities. This combination of investment is what allows the projects projected costs/benefits to be realized. Emergency dredging response capability providing safe dependable access to the Pacific Ocean is the critical factor. Without it, the ports are in danger of being closed and safety to life and property is put in severe danger.

As you can see from the enclosed COE Dredging schedules including Fiscal years 1992 and 1993, an increasing amount of the dredging is being allotted to the private dredging contractors. While I have heard no complaints on their performance, real legitimate concerns still exist. If the reduction of the work load for the COE Hopper Dredges Essayons and Yaquina continues, their cubic yard cost may become non-competitive. The resulting mothballing, standby or transfer of those dredges in our opinion would be a serious threat to our future dredging costs and ports survival.

Both vessels are state-of-the-art dredges with long-time experienced crews serving our nation well. Response time to our present emergency dredging by the Portland District has always been prompt. Private dredges based in Texas, California, or Seattle, Washington are many days away from our sites. There is also the concern that once the COE Minimum Dredge Fleet is gone that contract costs will escalate rapidly.

In closing, we are very grateful for this Committee's careful scrutiny of our coastal ports needs and government actions that allow us to contribute to the national economy.

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Section 107 Studies/Projects in the State of Oregon

All Dollar Amounts are in ($1,000), and represent total project costs

Name	Initiation Date	*Phase*	*Completion Date for Phase*	*Construction Date*	Construction Cost
Coquille River, Bandon, OR	Feb-86	Plans & Specs	Apr-93	May-94	$3,000
Newport, OR	Dec-89	Reconnaissance	Jun-93	Jan-97	$4,300
Port of Gold Beach, OR	Feb-90	Reconnaissance	Sep-93	Sep-96	$800
Port of Morrow, Morrow County, OR	May-89	Reconnaissance	Dec-93	Apr-96	$1,150
Yaquina River, Port of Toledo	Aug-91	Reconnaissance	Apr-93	N/A	N/A

Section 111 Studies/Projects in the State of Oregon

Umpqua River, Winchester Bay	Jul-86	Feasibility	Jan-94	Jan-95	$1,500
Siuslaw River Near Florence	Mar-92	Reconnaissance	Dec-93	Aug-96	$600

ACOE O&M FIGURES FOR OREGON COASTAL PROJECTS

PROJECT	FY 92 PROPOSED	FY 92 ACTUAL	FY 93 PROPOSED	FY 94 PROPOSED
Chetco River, OR	432,000	417,000	684,000	677,000
Coos Bay, OR	4,313,000	431,000	5,100,000	5,470,000
Coos Bay, OR (Deep Draft Navigation)	455,000		800,000	830,000
Coquille River, OR	302,000	293,000	399,000	405,000
Port Orford, OR	301,000	292,000	401,000	226,000
Rogue River, OR	713,000	688,000	828,000	718,000
Siuslaw River, OR	656,000	841,000	847,000	733,000
Skipanon Channel, OR	413,000	264,000	353,000	13,000
Tillamook Bay & Bar, OR	274,000	70,000	8,000	0
Umpqua River, OR	1,147,000	383,000	1,428,000	1,301,000
Yaquina Bay & Harbor, OR	1,221,000	1,539,000	693,000	1,520,000

FY 93 SCHEDULED DREDGING

APPARENT LOW BIDDER	DREDGE	PROJECT	CYS
North American Trailing Co.	(H)	Mouth Columbia River	3,200,000
		Col. & Low. Willamette	800,000
(BCOP REVIEW)	(C)	Coos Bay Harbor	400,000
Nehalem Dredging, Inc.	(P)	Rogue River, Gold Beach	55,000
(NA)	(C)	Wahkiakum Ferry	15,000
Manson Const. & Eng. Co.	(H)	S. Coast: Chetco, Rogue, Coquille, & Coos Bay Inside	300,000
(NA)	(C)	Chetco Rock Removal	8,000
(NA)	(C)	Winchester Bay Boat Basin Entrance	40,000
(NA)	(C)	Baker Bay	40,000
(NA)	(H)	Coos Bay Entrance	800,000

FY 92 DREDGING

CONTRACTOR	DREDGE	PROJECT	CYS
Advanced American Diving	(C)	Upper Columbia River	28,992
Blickle Construction Co.	(C)	Upper Columbia River	14,400
	(P)	Upper Columbia River	34,704
Brusco Corporation	(C)	Chinook, WA	147,631
Dutra Marine Incorporated	(C)	Coos Bay Harbor	757,200
Kerr Construction	(Sub-pmp)	Port Orford	587
Manson Const. & Eng. Co.	(H)	Mouth Columbia River	899,345
	(H)	Col. & Low. Willamette	80,540
Nehalem Dredging, Inc.	(P)	Upper Columbia River	82,793
	(P)	Gold Beach, Rogue River	78,441
Portable Hydraulic Dredging	(P)	Upper Columbia River	28,803
Port of Portland	(P)	Col. & Low. Willamette	2,211,150
Ross Island Sand & Gravel	(C)	Upper Columbia River	66,212
	(P)	Upper Columbia River	197,939

DREDGE NOTE

(C) Clamshell Bucket Dredge
(H) Hopper Dredge
(P) Pipeline Dredge
(Sub-pmp) Submersible Pump

CENPP HOPPER DREDGING	FY 92 PROJECTS	CYS
Essayons	Col. & Low. Willamette	2,170,551
Yaquina	Col. & Low. Willamette	414,114
Yaquina	Chetco River	27,802
Essayons	Coos Bay	531,501
Yaquina	Coos Bay	321,652
Yaquina	Coquille	93,732
Essayons	Gray's Harbor	881,336
Yaquina	Gray's Harbor	136,952
Yaquina	Humboldt Bay	352,258
Yaquina	Rogue River	32,747
Essayons	San Francisco	785,379
Yaquina	Siuslaw River	244,344
Yaquina	Umpqua River	285,043
Yaquina	Vanc. - The Dalles	48,963
Yaquina	Yaquina Bay	321,652

HOPPER DREDGE ESSAYONS - PORTLAND DISTRICT

FY 1993

START DATE	STOP DATE	PROJECT NAME	QUANTITY	WORK DAYS
1-Oct-92	29-Nov-92	MCR/C&LW	2,480,000	59
30-Nov-92	27-Mar-93	SEASONAL REPAIRS		117
28-Mar-93	31-Mar-93	C&LW	190,000	4
1-Apr-93	22-May-93	SAN FRANCISCO DISTRICT	1,700,000	50
23-May-93	24-Jun-93	MCR/C&LW	1,200,000	32
25-Jun-93	20-Jul-93	COOS BAY	700,000	25
21-Jul-93	25-Jul-93	MCR/C&LW	180,000	5
26-Jul-93	31-Jul-93	REPAIRS		6
1-Aug-93	3-Aug-93	MCR	110,000	3
4-Aug-93	3-Sep-93	GRAYS HARBOR	1,200,000	30
4-Sep-93	25-Sep-93	MCR/C&LW	940,000	22
26-Sep-93	30-Sep-93	REPAIRS		12
			[illegible]	

HOPPER DREDGE YAQUINA - PORTLAND DISTRICT

FY 1993

START DATE	STOP DATE	PROJECT NAME	QUANTITY	WORK DAYS
1-Oct-92	31-Oct-92	OREGON COAST	232,000	30
1-Nov-92	15-Nov-92	COL. ESTUARY PROJECTS	188,000	15
16-Nov-92	9-Mar-93	SEASONAL REPAIRS		114
10-Mar-93	14-Mar-93	VANCOUVER TO THE DALLES	50,000	5
15-Mar-93	19-Mar-93	C&LW	82,000	5
20-Mar-93	1-Apr-93	OREGON COAST	101,000	13
2-Apr-93	2-May-93	HUMBOLDT HARBOR	125,000	30
3-May-93	25-Jul-93	OREGON COAST	627,000	81
26-Jul-93	4-Aug-93	REPAIRS		10
5-Aug-93	14-Aug-93	COOS BAY	77,000	10
15-Aug-93	4-Sep-93	GRAYS HARBOR	200,000	20
5-Sep-93	25-Sep-93	OREGON COAST	163,000	21
26-Sep-93	30-Sep-93	REPAIRS		11
			[illegible]	

UPDATED: 6-Apr-93

Senator HATFIELD. Commissioner Sheldon.

Ms. SHELDON. Senator Hatfield, my fellow commissioners at the Port of Garibaldi asked that I extend their thanks to the subcommittee for its past effort and support made on behalf of the Port of Garibaldi and the coastal ports of the State of Oregon. The 13 coastal ports of Oregon, without your fair consideration and expenditures, would be hard pressed to function. Because of the importance of the Corps of Engineers on our operations, I am here today to ask that this committee please maintain the Corps' civil works budget for operation and maintenance of our 13 coastal ports at the 1993 level, or $11 million.

I would also like to convey my commission's support for the Corps of Engineers' sections 107 and 111 continuing authorities program. These programs are necessary for small ports to accomplish the variety of programs that are needed for them to remain viable.

CORPS MINIMUM DREDGE FLEET

I need also to express our concern about the continuation of the Corps of Engineers dredge fleet. Because of the rural character of our coastline private dredging is not available on a competitive basis for our scheduled projects and is never available for emergencies when immediate attention is required.

A good example of this occurred this summer. A small coastal port in California, working with the Corps of Engineers, contracted a private dredge firm to do some work on its facility. The private company's equipment was not able to meet the challenge and consequently, halfway through the project, had to stop operations.

The Corps had to bring in a dredge and finish the job. This was not the fault of the private contractor. The real problem is the length and the rural nature of our coastline. The conditions are different and ever-changing at each port on the coast. Consequently, dredge contractors are not able to maintain the proper equipment to meet the harsh conditions of our rural coastline. It is just not cost effective for them.

When making the decisions about the funds for this minimum dredge fleet, please consider our isolation from adequate private dredging equipment in making your decision.

The Port of Garibaldi supplies about $16 million of commerce to a county of 22,000 people. The port is expanding and plans to import logs for a saw mill, and grains and feeds to support the Tillamook dairy industry. With this subcommittee's continuing support, we will meet our goals.

And I thank you very much.

Senator HATFIELD. Thank you, Ms. Sheldon.

Ms. Milford, do you have any comment?

Ms. MILFORD. Senator Hatfield, the one thing that I wanted to say to you is that I am here as the vice chairperson of the Tillamook County Board of Commissioners in support of this testimony. I feel that we do need to support this project, especially for our coastal towns. Thank you.

Senator HATFIELD. Thank you. I would like to engage in a few questions here to emphasize and to build the record on points that you have made in your testimony, particularly as it relates to the role of the hopper dredge.

CORPS MINIMUM DREDGE FLEET

The subject is a little redundant now, I am sure, for all of us. I feel like this is one of those windmills that I have been battling for 26 years in the Senate. When we think we have a solution or a resolution of that issue, it seems to come up and bite us again.

As you know, in the conference report accompanying last year's appropriation bill, this subcommittee, as a sort of a compromise, directed the Corps to allow private dredging contractors to bid on an additional 7.5 million cubic yards of dredge work nationwide. That was as against the efforts by some to try to abolish the whole role of the hopper dredge or to put it into inactive reserve.

Now, from my understanding the impact will be felt by the hopper dredge *Yaquina*, which will lose about 500,000 cubic yards of work this year. So, I am asking now, just to underscore the point here, how do you assess this new arrangement under the provision we put in last year's appropriation bill, not just nationwide, but more specifically to your own experience with the *Yaquina*? What effect will it have on the Oregon coastal ports?

Have any private contractors bid on or accomplished any work for the Oregon ports? Where is the closest private hopper dredge available for that work, or for a natural disaster, or for emergencies?

You mention the potential disaster of an earthquake. What would be the availability of a Corps dredge or a private dredge to move in on such emergencies under the present circumstance? Those are just a few thoughts to come to my mind.

Mr. TERNYIK. Senator, the Siuslaw Channel was dredged by the *Yaquina* last year. But you have talked about safety in the past for both the commercial fishermen, commercial traffic, and sport fishermen. We have unique conditions on the Siuslaw and several other of our coastal ports. The Corps is so flexible in moving the *Yaquina* and taking care of those emergency situations just almost instantly that we really appreciate that, and it keeps us open and it keeps it safe.

On the other hand, the Siuslaw River has been dredge by a private hopper dredge—actually it was a barge that they took out. They did a good job. They were there just a very, very short time and that was it. As far as coming back to do any work after that—on an emergency basis, which can happen in shoaling two or three times a year—no, it is not available.

Senator HATFIELD. Where is that private barge located?

Mr. TERNYIK. I am really not sure on that. I will find out and let you know, though. And I am not sure whether it is available now.

Senator HATFIELD. Under what circumstance was it that you brought it in? On a bid basis?

Mr. TERNYIK. It was brought in on a bid basis that year; yes.

Senator HATFIELD. To supplement the work of the *Yaquina*?

Mr. TERNYIK. Well, yes; it was to do the annual dredging.

Senator HATFIELD. Yes; the annual, not on an emergency basis—to respond to an emergency situation.

Why did the Corps choose private as against having the *Yaquina* do the work?

Mr. TERNYIK. Well, I think it was due to pressure from the private industry, that they needed part of the work, and so that was why it was done. I do not think there was any reluctance on the part of the Corps of Engineers to have the *Yaquina* accomplish the work.

And thanks to your efforts in this committee, we went years and years before we were able to get the *Yaquina*. We had that old dredge *Pacific* that was on the beach in Okinawa when I was there in 1945.

So, we finally got a state-of-the-art dredge. We have a crew on that dredge that has an average of 17 years' experience working in very, very dangerous conditions. And to throw that away or try to put that into private industry bidding to us is just unthinkable.

Senator HATFIELD. But you see what you are telling me really this morning is that you had a hopper dredge or a barge available as an alternative to the *Yaquina*. I would like to have, if you would provide for the record, its location and its availability for coastal port dredging.

If we do have that private capacity then, of course, it weakens our argument a great deal as to the maintenance of a Federal hopper dredge, not on a quantitative basis, but on the normal operation of at least one or two or more ports.

Mr. TERNYIK. Now what has happened, though, Senator—that was several years ago that they actually dredged the Siuslaw navigation channel with a private dredge. Whether that dredge is even on the Pacific coast now I do not know. And the other thing that we are concerned about, and it is good business on the part of the private dredges, if in fact there is an emergency dredging situation like, say, Mount St. Helen's or something that happens somewhere else on the Pacific coast, even out of the country, those dredges are going to leave and go to where the money is. They are not going to stick around to take care of small ports.

Senator HATFIELD. That is true because, as you know, during the Vietnam War some of the Federal dredges were sent to Vietnam, leaving our coastal ports and others bereft of that service.

Ms. Sheldon, do you have any comments to make on that question?

Ms. SHELDON. I do not.

Senator HATFIELD. Ms. Milford?

Ms. MILFORD. No; thank you.

PREPARED STATEMENT

Mr. TERNYIK. Mr. Chairman, if I could add one other thing that I forgot. The Port of Toledo was not able to be here this morning. They have submitted some testimony for the record, and I would like to have that made part of the record.

[The statement follows:]

STATEMENT OF PORT OF TOLEDO, OR

The Port of Toledo has an opportunity to restore its economic health. Because we are a timber community, our economic base has been diminished and hopes for employment is not anticipated.

The Georgia Pacific Corporation who operates a mill in the city of Toledo, has provided a possible solution to our problems. The G.P. Mill would like to barge to the Port of Toledo wood chips and hog fuel for their plant. This would mean that the Port would be receiving as much as 98,000 tons annually of barge traffic. The Corps requires at least tonnage of 25,000 tons to be eligible for Corps dredging; we would exceed this figure.

The success of this barge operation is vital for our economic recovery. If the barging is successful and the channel opened, the Port is planning to develop a ship repair yard on Toyko Slough. This ship yard has the possibility of creating and retaining 200 jobs for our county, a county which is suffering from double digit unemployment.

That is why the Port of Toledo Commissioners are asking the members of this subcommittee to support the Corps budget at the 1993 level, support for the authorities program 107 and 111 and support to maintain the Corps minimum dredge fleet. For our plans to go forward the Port of Toledo must rely on the Corps of Engineers to plan and carry out the dredging of our channel.

Thank you for this opportunity to submit this request. With this subcommittee's support for the Corps programs, the Toledo Community will be able to restore it's economy and put its citizens back to work.

CONTINUING AUTHORITY PROGRAMS

Senator HATFIELD. Last year, Mr. Ternyik, you made a statement, I suppose I would call it a critical statement, that it was your opinion that the Corps was dragging its feet on some of the sections 107 and 111 projects. Do you want to update me on what your view about that is now?

Mr. TERNYIK. Well, I am not going to say it is the Corps' fault, and I have talked with the Corps several times about this. They only have so much money to work with, both in planning and actual funding for construction. So, that is part of the problem, there is no question about that.

The project that I was concerned about on the Siuslaw River last year is in the same limbo, it has not gone anywhere.

Senator HATFIELD. No change in the circumstance? Any change in what you perceive to be the attitude of the Corps?

Mr. TERNYIK. Yes; there is.

Senator HATFIELD. Is the Corps continuing to drag its feet?

Mr. TERNYIK. They are trying to work through on that project and the person that is trying to get the project through has hired Augie Beeman to help them. So I have a healthy respect for Augie and I feel that the project will move forward with his assistance. But it is extremely slow and the erosion continues.

Senator HATFIELD. Well, again, I want to emphasize that last year you commented were that the Corps was dragging its feet on several 107 and 111 continuing authorities projects on the coast. How would you characterize the Corps' attitude now? Has it shifted, or changed, or improved?

Mr. TERNYIK. That may have been an inappropriate statement on my part in saying that the Corps was dragging its feet when actually, you know, if you do not have the money and the staff to do the projects and do the planning and everything, that is another thing.

I think that the Corps, as near as I can tell, is moving forward on all projects as fast as they can with the money available.

ADDITIONAL PREPARED STATEMENTS

Senator HATFIELD. Thank you very much. I appreciate your presence here this morning. I would like to insert in the record at this point a statement, the testimony from the Port of Newport signed by Mr. John W. Rayburn, executive director. Without objection we will include that in the record.

Any other ports that wish to have written testimony included in the record, we will have the record open for about 2 weeks, until about April 20.

Mr. TERNYIK. We will have an opportunity, then, to submit additional testimony?

Senator HATFIELD. Yes; just send your testimony to me here and we will put it in the record.

Mr. TERNYIK. Thank you very much, Senator.

Senator HATFIELD. Give my friends all a hearty hello when you see them down on the coast.

Mr. TERNYIK. Yes, sir.

[The statements follow:]

STATEMENT OF JOHN W. RAYBURN

Dear Senator Johnston, thank you for the opportunity to present the following written testimony regarding the 1994 budget request of the U.S. Army Corps of Engineers and how it impacts the Port of Newport specifically.

Operations and maintenance dredging minimum dredge fleet

The Port of Newport is concerned that Oregon's coastal ports may see a further reduction in service currently provided by the Corps' hopper dredges. Although our port does not appear to be impacted by the Corps' reduced days of service this year, as the Dredge *Yaquina* is scheduled to accomplish our project at Yaquina Bay, the performance by private industry has yet to prove it is capable of meeting the unique demands of the Pacific coast. We strongly request that any forthcoming proposals to further reduce the days of service for the Minimum Dredge Fleet be rejected until this year's "test case" for contracting with private industry has proved successful.

The Port of Newport has always been very appreciative of the level of service and the quick response to emergency situations provided by Corps over the years. We are hopeful that allocations for coastal maintenance dredging will not experience any reductions from the $12 million average of recent years.

Continuing authorities program small navigation projects

The Section 107 reconnaissance study for the Port of Newport's breakwater in the north basin of Yaquina Bay is nearing completion. We are confident that the preliminary findings in this study will support the need to move to the next phase of analysis and support replacement of this 50-plus year-old structure, as it continues to provide vital shelter to moorage for Newport's commercial fishing fleet. Without replacement of the breakwater, Newport's fleet would be completely displaced, not to mention protection afforded the neighboring recreational marina, the Embarcadero, would be lost, as well.

It is important to note that Newport ranked 19th in the nation, seventh on the Pacific Coast, for commercial fishery landings in quantity for the years 1989–1991, averaging over 43 million pounds of product landed. Newport experienced a 287 percent increase in 1992 landings, as a result of the domestic harvest of Pacific whiting off Oregon's coast. This equates to 123.0 million pounds of product landed with an associated value of $22.8 million dollars.

General investigations program

Currently, an apparent failure of the north jetty at the entrance to Yaquina Bay is under investigation. The 1993 budget provided $1.5 million to examine possible causes for recurrent failure in one particular section of the jetty and to develop a more permanent method of construction. The Port of Newport asks that this project be held as a priority in the budget review process so that safe entrance to Yaquina Bay for waterborne commerce, commercial fishing and recreational vessels can be maintained.

Again, thank you for this opportunity to offer information we believe is critical to the economic health and public welfare of the Port of Newport and greater community to which we serve.

STATEMENT OF F.E. KNIGHT, PRESIDENT, PORT OF NEHALEM, OR

The Port of Nehalem goes on record here in support of the $3,000,000 for Navigation Projects (Section 107) under the "Continuing Authorities Projects Not Requiring Specific Legislation" included in the fiscal year 1994 Civil Works Budget for the U.S. Army Corps of Engineers.

The Corps' Portland District had a "107" study project on the Nehalem River placed in an inactive status in 1983 until such time as the Port of Nehalem could produce further potential economic justification for its proposed eight-foot-deep channel at Mean Lower Low Water (MLLW) after the Corps' favorable findings of a four-foot-deep channel at MLLW.

The economic justification for the increased channel depth, and the channel development itself, hinges directly on the issuance of dredge and fill permits by the State of Oregon's Division of State Lands and the Corps of Engineers Portland District for a major harbor and marina development on the Nehalem River.

Both the Oregon Division for State Lands and the Corps of Engineers Portland District have consistently refused issuance of the dredge and fill permits for the proposed major harbor and marina development on the Nehalem River, although the developer has expended over $200,000 for legal and other professional fees, and for providing mitigation of the wetland area for which the dredge and fill permits are requested. Mitigation is the replacement of the wetland lost in the dredging and filling of the proposed harbor and marina.

We respectfully request that this letter be incorporated in the hearing record on the Corps of Engineers proposed budget fiscal year 1994.

Your cooperation will be most appreciated. Thank you.

STATEMENT OF ROGER W. MCCORKLE, MAYOR, FLORENCE, OR

Dear Commissioners, you, of course, are certainly aware of the vital need for dredging of the Siuslaw River on a continuing basis. It is the lynch pin to so much of our economic survival as a coastal community. If dredging is lost, then commercial fishing is lost and most sports fishing as well. With that would go many support businesses and jobs that are linked to our ocean resource.

These are difficult economic times in rural western Oregon as we've been adversely affected by owl rulings and subsequent declines in timber supply and are coming off of a bad fishing year looking forward to a worse one. We look to the Port for a leadership role in keeping the Siuslaw channel adequately dredged. If we can be of assistance, please let us know.

LOWER COLUMBIA RIVER CHANNEL DEEPENING

STATEMENT OF MIKE THORNE, EXECUTIVE DIRECTOR, PORT OF PORTLAND, OR

ACCOMPANIED BY TOM DECKER

Senator HATFIELD. Now, I would like to invite Mr. Mike Thorne, the executive director of the Port of Portland to come forward. And if you wish to bring any of your colleagues, we would be pleased to have them this morning as well.

Mr. THORNE. Thank you, Mr. Chairman, and good morning.

Senator HATFIELD. Why don't you introduce those accompanying you for the record?

Mr. THORNE. My colleagues have suddenly abandoned me, it appears, but with me this morning is Mr. Tom Decker who represents the port and spends a good amount of his time there.

Senator HATFIELD. Would you repeat his name, please, for the record? [Laughter.]

Mr. THORNE. Tom Decker. Thank you very much and good morning, Mr. Chairman. As indicated, I am Mike Thorne. I am the executive director of the Port of Portland and I am here this morning not only representing the Port of Portland, but other ports on the Oregon and Washington border. Actually, there are six other ports that I am here this morning to address the committee briefly about.

Let me say first you might call this, Mr. Chairman, something of a report to you in appreciation for the results of well-laid infrastructure dollars that have put together one of the most effective transportation systems now existing in the Columbia River. The ports that I am representing this morning include the Ports of Astoria, St. Helens, Kalama, Long View, Vancouver, and Woodland.

We are all working together as a part of the Columbia-Snake River system and our representation here this morning is to seek funding for the Corps of Engineers—the first phase of the Corps' feasibility study for the Columbia River navigational channel deepening project in Oregon and Washington.

Consistent with your request, Mr. Chairman, we have provided written remarks and I am summarizing those now, at this time.

The project I am speaking of—outside of the Bonneville Locks which, Mr. Chairman, you know well as a project that you worked on and made it possible. And I can report to you again this morning, I was through the lock last Friday; it works wonderfully. It takes 9 minutes to fill the lock after draining. It is a phenomenal project.

Senator HATFIELD. What was the old time?

Mr. THORNE. It used to take 8 hours to get through the locks. Barges now will be able to move through in a matter of minutes.

Senator HATFIELD. Eight hours down to a few minutes.

Mr. THORNE. Yes; a phenomenal success and it will mean tremendous saving of time.

Senator HATFIELD. And the time to fill them?

Mr. THORNE. Twelve minutes.

Senator HATFIELD. And the old time?

Mr. THORNE. The old transit time was basically 8 hours because they had to uncouple barges and put them together. But I know the drain and the fill is a blink of the eye compared to the old time.

This project that I am speaking of, then, will probably be the next biggest project to the Bonneville Dam and it is an indication of the value that well laid infrastructure dollars mean in terms of aiding a country such as this that looks to transportation facilities as the key for our future survival.

I can report to you that the request that we are making today is a request that we think is driven off of market factors; driven by the success that I would like to point out. Our customers demand the opportunities for imports and exports and the market base is developing and justifies the project.

PORT AND CHANNEL CAPACITY

In 1981, there were two vessels with a draft exceeding 39 feet calling Portland. Last year, there were 143 vessels with a draft exceeding 39 feet calling Portland. As you know, Mr. Chairman, the present channel is 40 feet, so we are at capacity, new ships that are on line today for service later this year justifying the need.

Some trade volumes that you would be interested in—I know you are aware of that, but for the record, Portland now is the largest wheat exporting port in the United States. In addition to that, we are the fastest growing container port on the west coast, justified by 2 years of records now which underscore growth in the near 20- to 25-percent capacity.

I would like to say it is good management that is making all this happen but, in fact, there are some very real things that are taking place. It is an expanded trade area now that extends far into the Midwest, grain coming from the Dakotas and Minnesota, and corn coming from Nebraska; automobiles coming to Portland and serving 43 States now by land bridge, is an indication of this infrastructure system and what it means to this country's economy.

All of these factors are playing in to making the west coast, and specifically Portland and the Columbia-Snake River channel, a key tie for U.S. commerce with the rest of the world. And with your assistance, Mr. Chairman, just this last Sunday a new Korean liner service started calling Portland, and the first vessel was overbooked, to give you an indication of the demand, the trade volume that is coming out of the Portland area.

I think all of this is testimony to the fact that as a result of well laid infrastructure dollars looking to the future, we now have an integrated transportation system, including barge, rail, trucking, air cargo and air freight, and passenger service that is serving our area to the extent that was envisioned and designed.

Words now that are used in transportation systems talk about just-in-time delivery where inventories are actually in transit rather than going to a warehouse and being distributed. This is the wave of the future in terms of transportation systems.

I can report to you one carrier that is looking at Portland indicating there is 2-hour advantage between another west coast port. That 2 hours is all that is needed to get cargo to New York from the west coast, and is how critical the fine-tuned transportation system is for the future of this country's commerce.

Let me conclude my comments—and sometimes numbers make the point rather than words. To give you an idea of the value of that channel and what it means in terms of overall, total impact, 1 barge that does not traverse the Columbia River system is the equivalent to 115 trucks that have to come down our roads and highways, I–84, or whatever the case may be, to Portland. Again, 1 barge equals 115 trucks.

For grain, now that Portland is the largest wheat-exporting port and when you add all grain we are actually—we handle about one-third of the total U.S. grain. One foot of added draft on an average of 10 vessels per month is the equivalent of $300,000 per month of added commerce. Over a year, that is about $3.6 million. And even more striking, on the container side, 1 foot of extra draft on an average of 17 vessels per month, and that is that container vessels, is the equivalent of $3 million per month or $37 million per year of added commerce; just 1 foot of draft.

So, Mr. Chairman, there is a good story to tell. There is a market base that is justifying the requests that we are making here this morning and we very much appreciate this opportunity to be before your committee. And if there are questions, I would be more than delighted to respond.

[The statement follows:]

STATEMENT OF MIKE THORNE

Good morning Mr. Chairman and members of the committee, My name is Mike Thorne, and I am Executive Director of the Port of Portland, Oregon. My remarks today also represent six other lower Columbia River ports in Oregon and Washington.

This Committee has shown strong support for our efforts to improve the Columbia River transportation system over many decades. Let me start by voicing our sincere appreciation for the support you have shown for the Columbia River in the past.

I am before you today as the representative of the Columbia River Navigation Channel Deepening Project: the seven deep-draft ports located on the main navigation channel of the lower Columbia River. Besides the Port of Portland, these ports include, in Oregon: the Port of Astoria and the Port of St. Helens; and in Washington: the Port of Kalama, the Port of Longview, the Port of Vancouver, and the Port of Woodland. In 1992, more than 2,000 ocean-going ships carrying 36 million tons of cargo valued at more than $11.3 billion called at the private and public facilities located at these ports. This continues a 20-year trend that has seen cargo volumes double on the lower Columbia River.

REQUEST SUMMARY

On behalf of the seven ports, I am seeking full funding of the Corps' capability for the feasibility study of the channel deepening project on the lower Columbia River. This amount, when included in the fiscal year 1994 Energy and Water Development Appropriations Bill, would initiate the federal government's share of the study to investigate increasing the existing 40-foot navigation channel in the Columbia River to 43 feet.

In addition, let me alert the Committee to the problem of rising costs for the feasibility study. We are working with the Corps to keep costs in line, but environmental reviews, particularly those relating to salmon, threaten to drive the expense much higher. While I am not prepared today to recommend means for solving this problem, I do want to alert the Committee to it and suggest that the Port of Portland and others are examining possible solutions to recommend to Congress in the near future.

My last request is for continued financial support for the Corps of Engineers' hopper dredge fleet. These vessels, which provide timely and effective service in the Pacific Northwest, are of critical value to the navigation needs of the Columbia River and coastal ports.

You will also hear from coastal ports about their needs this morning. The Port of Portland sees our sister ports on the coast as an integral part of a growing and efficient transportation network serving the needs of the Northwest. I believe we all agree on the importance of the Corps' hopper dredge fleet in keeping our harbors operating effectively.

FUNDING FOR THE FEASIBILITY STUDY ON THE LOWER COLUMBIA RIVER

Let me elaborate on each request, beginning with the study of the channel project in the lower Columbia River.

There is plenty of discussion these days about improvements to our transportation infrastructure. I can think of no better example—or no better investment—than this improvement to the Columbia River deep-draft waterway.

Thanks to the work of this Committee in recent years, the reconnaissance phase of this investigation is complete. Results of that study show a federal interest in proceeding. We are requesting full funding of the Corps' capability in this year's bill to provide the initial funding for the study process. Sponsor ports are close to signing the local cost share agreement with the Corps of Engineers. With the federal funding available and the local cost share agreement in place, the feasibility study can move ahead in a timely fashion.

NATION NEEDS COLUMBIA RIVER EXPORTS

The ports I am representing here today, the communities they serve, and the economy of the Pacific Northwest need this feasibility study, and the channel improvements we are confident it will recommend. A navigable river system is the most efficient means for products from our region and beyond to remain competitive in world markets. Economics of scale already are bringing larger, deeper draft vessels into the Columbia River. All indications are that this trend will continue.

International trade within our region is expected to expand in the next 20 years by two-and-one-half times. Today, this trade represents 18 percent of my state's gross product. For Portland alone, trade is creating more than 7,300 jobs and influencing nearly 34,000 more. If this region is to realize fully the benefits of future growth in international trade, an efficient water transportation system will remain a key competitive ingredient.

This fact is important from a national perspective as well. The Port of Portland sends many more goods overseas than we unload as imports. And we ship products from many western states, including many outside our immediate region such as Montana and the Dakotas. Portland was the nation's leading wheat export port in 1992, handling 22 percent of all U.S. grain exports. In the container market, Portland has shown the fastest percentage growth on the West Coast in recent years. Given the nation's continuing trade deficit, our net contribution of exports is a very positive factor in efforts to balance this equation.

We know of only one way to meet this growing demand for transportation capability to keep up with export opportunities. That is to build and maintain a navigation channel that can handle the larger vessels in use today and on order for the future. Since 1981, the number of ships with drafts of greater than 38 feet calling at Portland has increased from two per year to 143 per year: We began planning this navigation improvement project with increasing vessel size in mind. Frankly, that reality has caught up with us already. Larger and larger vessels calling at the sponsor ports remind us regularly of the need for this project.

MAXIMUM CAPACITY THROUGH INNOVATION

The 40-foot channel and a federally-authorized 55-foot channel at the mouth of the Columbia have been remarkably successful projects. Built on budget, they have served deep-draft vessels safely and with less maintenance dredging than predicted in part because of an innovation called LOADMAX. Initiated by the lower Columbia River ports and completed with the cooperation of the Corps and the National Weather Service of NOAA, LOADMAX has made the transportation system more effective.

LOADMAX allows ships to take advantage of deeper water due to tidal differences on the Columbia. At the heart is a computer system that monitors water levels at seven points along the Columbia. Using this technology, we can predict up to six days in advance how vessels can ride the high tide window all the way from Astoria at the mouth to Portland. Ships leaving Portland on their way to the ocean use the same system in reverse. In effect, ships gain about 3 feet of draft by timing their movements to coincide with tidal fluctuations in the river.

Even with the innovative LOADMAX system, we are reaching our capacity. A deeper channel is needed for the Columbia system to remain competitive.

A 100-YEAR PARTNERSHIP

Let me now offer some background on the Columbia River's navigation system and its 100-year partnership between the federal government and local interests.

In 1890, the Portland district U.S. Army Corps of Engineers completed a study defining the work needed to provide a 25-foot channel from Astoria to Portland. A year later, in 1891, the Port of Portland was created by the Oregon legislature, for the sole purpose of dredging the 25-foot channel. Completion of the project came in 1893.

Over the years, this partnership has seen successful authorization and construction of two more channel improvements: deepening to 35 feet, completed in 1950; and construction of the existing 40-foot channel, dedicated in 1973.

BENEFITS OF AN INTEGRATED SYSTEM

The main lower Columbia River navigation channel is one part of a total system. The main channel serves as the system's gateway, accommodating the largest, ocean-going vessels. But those of us on the lower river never forget the importance of the lock and dam system on the river's upper reaches. That this system exists, and is being improved today, is testament to the wisdom and foresight of this Committee and Congress.

In all, eight locks and dams extend the upriver barge system 465 miles inland to Lewiston, Idaho. This system was completed in 1975. By 1980, cargo volume projections for the year 2000 had already been exceeded.

One purpose of these dams and attendant locks is to serve navigation, allowing tugs and barges to carry products up and down the river. Other benefits include providing flood control, water for irrigation, and generating electrical power for the region. In return, crops—often irrigated with water from these same federal reservoirs—and some manufactured goods are moved by barge to lower Columbia River ports where they are loaded on ocean-going vessels and shipped to world markets.

This integrated system binds Lewiston, Idaho, to Kalama, Washington, and Astoria, Oregon: It ties the farmers and ranchers in eastern Oregon and Washington, or in Idaho and Montana, to the longshoremen and shipping clerks at our lower Columbia River ports.

This Committee demonstrated its recognition of this relationship with funding for the new Bonneville Lock. The new lock, which just opened, removes a bottleneck in river navigation and allows more efficient use of the entire lock system.

LOOKING AHEAD TO THE 21ST CENTURY

Between 1967 and 1993, cargo tonnage on the lower Columbia River doubled. At the same time, ship size and draft increased, allowing fewer vessels to haul increasing volumes of product from the Northwest and Midwest. This trend will continue.

Given the trend in ship sizes, time requirements, and the complexities involved in a channel improvement project, the reasons for proceeding as quickly as possible with the Columbia River navigation feasibility study are compelling:

—Panamax bulk carriers are moving out of Portland, Vancouver, Kalama, and Longview at drafts exceeding 40 feet, using LOADMAX and relying on fresh water discharge.

—Typical Panamax designs call for fresh water drafts of around 42 feet to get the full cargo carrying capacity of the ship, usually around 55,000 metric tons. If the lower Columbia River is to continue to play its part in the West Coast grain and feed grain export markets—for example, one-third of all U.S. wheat exports are now shipped from the Columbia/Snake Customs District—demand for this type of ship to move fully loaded with minimum delays will increase.

—Portland, Vancouver, and Longview all are deeply involved in nongrain bulk cargo shipments. These commodities, which include such exports as soda ash, alumina, bentonite clay, and copper concentrates, increasingly rely on Panamax vessels.

—Many newly-built container ships have design drafts of 40 feet or more. This year, we are seeing new Evergreen "R" class ships with design drafts of 41 feet make calls in our ports. The result: the Columbia River channel is right at the limit, given the dominance of outbound cargo and the tendency for these ships to sail from our region at maximum draft. As you know, other container ports are proceeding with channel projects at even greater depths to accommodate existing ship calls as well as those expected in the future. The coincidence of the demand from bulk carriers and container ships alike is favorable for the economy of the project we are proposing.

—Two of the top three U.S. export gateways depend on well-maintained river channels: the Columbia River and the Mississippi River. The transportation costs for many U.S. goods would make them noncompetitive in world markets if those two channels were allowed to silt up.

—Shipping lines, whose vessels are delayed or damaged by insufficient channel depths, are not likely to put up with such situations for long.

—The tight requirements of just-in-time delivery have triggered increasingly tight scheduling of vessel calls. A few hours of delay or potential delay, not to mention any damage to vessels or cargo from scraping bottom, can cause shipping lines to rethink the movement of their vessels. Navigation restrictions on the Columbia River, due to insufficient channel depths, could result in diversion of U.S. product exports to other U.S. ports.

—With respect to grains, the market response would more likely be substitution of foreign producers for U.S. producers. With respect to containers, as recent history shows, the reaction would be to substitute Vancouver, B.C. (not Puget Sound ports), for the lower Columbia River ports: In turn, that would lead to greater shipment of Canadian-processed agriculture and forest products at the expense of competing U.S. products

UNCERTAINTY OF FEASIBILITY STUDY COSTS

River management practices will change in the future under the Endangered Species Act. For local sponsors of the channel deepening feasibility study, that creates tremendous uncertainty about the ultimate costs of our co-sponsorship.

As time passes and there is a better understanding of what additional information is needed, costs for the feasibility study will climb. We are sure of that much.

One of the roles to be played by the lower Columbia River ports will be to monitor the Corps and exert discipline to keep expenses in order. We are already being vigilant in our efforts by reviewing Corps' budgets line by line. This is an essential step for local ports which must keep their local cost share amounts in line.

It is not safe to assume, however, that the Corps or local sponsors can keep all costs from escalating. Review of salmon critical habitat, salmon recovery plans and the like will put great pressure on the channel project for more environmental studies.

I am not here today to offer any ready solution to this dilemma. My purpose really is to alert Committee members to the issue and to assure you that we will keep you apprised of any developments.

HOPPER DREDGES

Adequate dredging of navigational waterways is an essential part of the transportation capacity provided by the Port of Portland and other Columbia River and coastal ports. Some policy-makers appear to be interested in attempting to reduce the number of Corps dredges for this essential work. This would be the wrong move, because reductions in the Corps' hopper dredge fleet would not be offset by increases in private dredging capacity, at least in the Pacific Northwest. This region is dominated by one private operator. As a consequence, restricting the Corps' fleet likely would lead to higher costs and less service and case history indicates this is what happens.

A similar concern arises when we review the capacity of the private sector to respond to emergency dredging needs. By emergency, we are not referring solely to something on the magnitude of Mount St. Helens. We also must contend with shoaling or sand wave problems in the Columbia River. Threats from these navigation difficulties could curtail or stop navigation in the channel if ignored. These problems do not always require a large amount of work; they do require very quick response. If Corps dredges serving this region were ever removed, our ability to respond promptly and effectively to these challenges would be greatly diminished. The result: delayed cargo and lost export opportunities.

Cost is an important consideration for a variety of reasons. Funding for the Corps' Operations and Maintenance budget has remained flat in recent years. At the same time, the cost of completing this dredging work is higher due to new regulations and challenges related to the environment. The result: less money for actual O&M work. On behalf of all ports, we urge Congress to provide sufficient O&M dredging funds to meet the needs of the customers.

Complicating this picture is the congressional debate over providing more work for private sector dredges. This year, based on the fiscal year 1993 appropriations bill, more work will be contracted to private dredges. We are interested in the least costly option for dredging, yet the Corps' own experience in the Pacific Northwest shows that the lack of competition here makes it difficult to assure truly competitive bidding. We firmly believe the Corps should refrain from forging a new hopper dredge policy based on one year of experience under last year's appropriations bill.

CONCLUSION

In conclusion, Mr. Chairman, we believe the existing Columbia River navigation channel represents a remarkable success story in terms of partnership—federal, state, and local governments—and, more importantly, in terms of regional and national trade development. Now is the time to start the next chapter in that success story.

STRONG LOCAL LEADERSHIP

Senator HATFIELD. Thank you very much, Mr. Thorne. You are very modest in taking any of the credit for this remarkable record out there. But I just want to comment for the record, I know of few times in modern history where we have had the strong leadership right through all echelons of local government that we have today, not only in the port that you represent, but in the city council, the mayor, the local officials, and Tri-Met. I could go through each echelon of the local government there and indicate that in my view we do have extraordinary leadership of which we are all very proud.

Working together is another factor. Sometimes you can get strong leaders and they are so jealous trying to maintain their turf that they see little of the big picture of working as a whole, realizing the sum is greater than the parts. But I think we have demonstrated again that strong leaders can work together cooperatively and maximize their talents that way.

I want to underscore that when you make comparative remarks here about other modes of transportation replacing or supplementing other modes, I think you would agree that if we are looking at conservation of energy as another factor in our overall economy, waterborne transportation is probably the most energy efficient of all methods of moving cargo. It is not going to be available everywhere and I am not suggesting that all others are undesirable, I am just saying that wherever we can utilize water transportation we are in the field of energy conservation.

ECONOMIC IMPACT OF COLUMBIA RIVER PORTS

Looking at the total import-export commodities of Oregon, I am glad that you included in your testimony the lower Columbia ports as well. From an economic perspective, we cannot really separate them from the Port of Portland itself. I understand the figure to be in excess of $9 billion annually.

Mr. THORNE. Actually, Mr. Chairman, the Portland Harbor, including the ports that we have talked about, about $12 billion. The Portland Harbor itself, about $9 billion.

Senator HATFIELD. I see. So by adding the lower Columbia we have another $3 billion of value?

Mr. THORNE. That is correct.

Senator HATFIELD. So when you speak then about the deepening of the channel, we are talking about some pretty big money. We are not just adding a few million here, but we are looking at some rather significant increases.

I understand that we are close to signing with the lower ports and the Port of Portland a feasibility agreement with the Corps of Engineers as the second step toward a potential deepening project. Is that correct?

Mr. THORNE. Yes, Mr. Chairman; that is correct.

Senator HATFIELD. Have you an estimated cost of that feasibility study at this time?

FEASIBILITY STUDY COST ESTIMATE

Mr. THORNE. Actually, Mr. Chairman, in response to your question, yes. At this time the estimate cost is approaching the $7, $7.5 million figure. One of the interesting challenges we have had when we first started negotiations consistent with the 1986 act we were looking at about $2.4 million. So, during the period of negotiations, that number has grown rather dramatically.

Senator HATFIELD. Of course, in the meantime we have had the salmon recovery cost factor added into this, have we not?

Mr. THORNE. That is correct, Mr. Chairman.

Senator HATFIELD. We also have the question of dredge spoils disposal, which is sort of a difficult matter to define precisely at this time. So, it could be, again, an increase in cost.

Mr. THORNE. All the factors that you are describing and many more that deal with wetlands mitigation or to do with dredged——

Senator HATFIELD. Federal regulations and Federal statutes?

Mr. THORNE. That is correct.

Senator HATFIELD. What is your judgment regarding the likelihood of a significant rise from that $7 to $7.5 million for the feasibility study after you have signed the agreement, once you get into the study? How do you assess that?

Mr. THORNE. Mr. Chairman, let me describe it this way. Based on our experience where we started initially, as I had mentioned, in the $2 to $2.4 million range, and we have seen it grow to $7.5 million because of factors beyond our control—it is not that the Corps is not working cooperatively with the sponsor ports but, rather, what we have is our attempt to engage in a contract—a contract in which the two parties cannot control the conditions, if you will.

In other words, we are discussing with the Corps, we are going to pay the money and they are to deliver a product. But about the time we sign—in fact, all of the ports have agreed on one figure in the neighborhood of $5 million. And now, as a result of these add-ons and additional conditions, that number continues to grow.

And to answer your question, the ability of the sponsoring ports then to control or to manage their budgets and report to their commissions and to the people that they are held accountable to is obviously limited by virtue of the fact that we have fixed budgets and fixed dollar amounts that we have to manage to and we are unable to continue to manage the escalation in cost that we have described.

Senator HATFIELD. You point up a very, very important issue. It seems to me that when you enter into an agreement of this kind, to change the rules once you are in the process of implementing the agreement, particularly if it is done unilaterally, is an unfair and bad public policy.

I am going to discuss this matter with Senator Johnston, our chairman, because it seems to me that we ought to be able to find some way to cap an agreement of this type.

At this time, I am happy to welcome our colleague from the State of Washington, Senator Gorton, who, of course, is our newest member of this subcommittee, and has a great interest in this issue since a number of those lower Columbia ports are located on the Washington side of a river that we share.

Senator Gorton, Mr. Thorne is from the Port of Portland and is discussing with us negotiations with the Corps on the deepening of the Columbia River channel.

Senator GORTON. Yes.

Senator HATFIELD. He has indicated that the estimated costs, just since they began the negotiations, moved from $2 to $7.5 million in a very brief time.

Senator GORTON. It has been a moving target?

Senator HATFIELD. Yes; a moving target. And I was just expressing my concern that once they do sign that agreement they do not have the financial capabilities, some of the smaller ports particularly, to continue to escalate their share which is 50–50.

It seems to me this committee ought to address that matter as it relates to a formal agreement that we hope will be signed sooner rather than later.

I would defer to the Senator from Washington State.

Senator GORTON. Mark, I thank you. I suspect the kind of questions that I have were the very questions that you have asked and gotten into the record all ready. And, of course, they do have to do with this project and that moving target—the deepening of the Columbia River navigation channel at the mouth.

The Port of Portland is a very, very large port. Some of the other ports both in Washington and Oregon are small and operate on relatively minor, small tax bases. We need to get this feasibility study started and we need to fix what their contribution is so that we can go ahead.

FUEL TAX INCREASE

Senator HATFIELD. One last question, Mr. Thorne. What impact would the proposed increase of $1 in fuel tax on the barges have on the Port of Portland and the Columbia-Snake navigation system? Have you made any assessment of that?

Mr. THORNE. Mr. Chairman and Senator Gorton, we are in the process of trying to analyze that, but I can give you some information today which I think is significant. First of all, this represents about a 535-percent increase in the fuel tax. I think the significant point that we need to keep in mind when we look at the Columbia-Snake River system and the impact this has on barge traffic is to look at what are the alternatives.

As both of you gentlemen know, the development that has taken place on the 465-mile inland waterway called the Columbia-Snake system has tended to move all of those grain facilities near the river. Take communities like Condon, a small community 30 miles away from the Columbia River. The rail line does not go there anymore. So, what happens when you start to change the cost structure of various transportation modes you cannot automatically conclude that there is a transfer to another available mode. It is either all or nothing.

So, we will be prepared to continue to make the analysis that you have asked, but I can tell you from just sheer points of reality the alternatives are not available. You cannot adjust one cost structure and assume that transportation automatically goes to the other because the other is not available.

During the test drawdown to try to deal with the salmon issue, we were feverishly working, all the ports were working with Lewiston to try to figure out an alternative to get the cargo. Twenty-five percent of the containers that now move on the Columbia-Snake system come from up river—food processing and paper products. We found ourselves suddenly scurrying with how in the world do you move that product, because there is not another transportation mode available.

And so that is the dynamic you are dealing with. There is not an automatic transfer. It is either all or nothing. And I think that is the point that the barge operators so desperately are concerned about. And ultimately who suffers are the shippers, the people that are trying to move product to market.

Senator GORTON. And on them, the impact can be devastating.

Mr. THORNE. Absolutely; there is no alternative.

Senator HATFIELD. Would you repeat for Senator Gorton the statistic you gave about the loss of a barge for grain coming down the Columbia and how it would then be replaced by surface transportation?

Mr. THORNE. Yes; one barge of grain is equivalent to 115 trucks coming down that same system. So, when we look at environmental impacts and other costs of transportation it is a phenomenal impact.

Senator GORTON. And the energy efficiency is infinitely higher on the barge, is it not?

Mr. THORN. Yes; we are now in the new world of container movement on barge. You can put 80 containers on a barge and move it down the Columbia-Snake River system. That is 80 trucks that would have to run the same road. And when we are competing with different energy uses, air quality, and all of the factors that come in for a total environmental view of things, it is the most effective, most efficient system available and we should protect it.

Senator HATFIELD. Do you have any further questions?

Senator GORTON. No.

Mr. THORNE. Mr. Chairman, may I take the liberty to express to Senator Gorton the fine working relationship that the two States enjoy on the Columbia-Snake River system, and even the State of Idaho. We have probably the most effective working relationship that I have seen and many people report that.

I just want to extend to you my appreciation for the cooperation we are getting from your State.

Senator GORTON. That is exactly the information and advice I get from the ports on my side of the river, that it is wonderfully constructive.

Senator HATFIELD. I think, Mr. Thorne, you will find that the delegation here, and the Senator particularly, worked that closely too because we sense the oneness of our region in so many areas, not only in river transportation but in energy and forestry. So many things bind us together as a pleasant working relationship as well as a very obviously efficient working relationship.

Mr. THORNE. And to the leadership that you raised, thank you very much, because many of us back home understand that without the leadership we have from you all of that intercooperation would not be possible. So, thank you very much.

PACIFIC NORTHWEST FISH AND POWER ISSUES

STATEMENTS OF TED BOTTINGER, VICE CHAIRMAN, NORTHWEST POWER PLANNING COUNCIL

ACCOMPANIED BY JOHN N. ETCHART, MONTANA MEMBER, NORTHWEST POWER PLANNING COUNCIL

Senator HATFIELD. Now, I would like to invite Mr. Ted Bottiger, vice chairman of the Northwest Power Planning Council, and Mr. John N. Etchart, the Montana member of the Northwest Power Planning Council, to come forward.

Good morning. It is nice to welcome you this morning.

Mr. BOTTINGER. Thank you, Senator Hatfield and Senator Gorton. As you know, my name is Ted Bottinger and I am the vice chairman of the Northwest Power Planning Council and a representative from the State of Washington. To conserve time and at your suggestion, we will submit our full statement for the record.

FISH AND WILDLIFE RESOURCES

While we are charged with the planning for an adequate and reliable regional energy supply, the primary focus of our testimony today is on the council's other statutory responsibility, which is to rebuild the fish and wildlife resources damaged by the hydroelectric development in the Columbia River basin.

As you know, three stocks of Columbia River salmon are now listed as threatened or endangered. At the urging of this subcommittee, the tremendous efforts have been made by the regional interests to fashion actions that will lead to rebuilding the region's salmon runs.

These efforts, beginning with the salmon summit in 1990, led most recently to the adoption by the council representing the four Governors of the Northwest States to a comprehensive salmon recovery program.

SALMON RECOVERY PROGRAM

This regional recovery program integrates actions taken at each stage of the salmon's life cycle. It sets in motion immediate and significant actions to reverse the declines in weak salmon runs. It includes increased river flows, passage improvements at the dams, harvest reduction, habitat protections, hatchery reforms, and many other specific actions. This comprehensive regional program is realistic and it is based on the best available science and data analysis at this time.

The National Marine Fisheries Service has stated that our program will be the basis of the recovery plan it must develop under the Endangered Species Act. And, in fact, we worked closely with NMFS officials in the region and in Washington, DC, when we developed the plan.

So, we are confident that our regional recovery effort, developed with broad public involvement, will help the Northwest avoid the draconian measures that we witnessed in response to the spotted owl listing. We think we can also avoid the actions like those taken in California where the Bureau of Reclamation imposed severe cutbacks on water withdrawals from the Sacramento River to protect endangered winter chinook salmon runs, or on the Klamath River on the Oregon-California border which are currently in effect.

We believe that our salmon recovery effort will result in some impacts to current and future Federal budgets. As outlined in our written statement, however, most of these impacts will be included in the administration budget request for fiscal year 1994.

FISH BYPASS PROGRAM

The most important priority, as it has been in prior years, is the funding of the Corps of Engineers Juvenile Fish Bypass Program.

It is critical that we reduce the number of wild juvenile salmon that are killed at the dams on their downstream migration. The council and the governments of Oregon, Washington, Idaho, and Montana strongly support the Federal budget request for fish bypass facilities.

As you know, these bypass funds are appropriated to the Corps and will be repaid at current interest rates over the life of the facility by the electrical ratepayers of the Pacific Northwest. As a matter of fact, nearly 90 percent of the cost of the regional salmon recovery program will be paid by the ratepayers in the Pacific Northwest.

Furthermore, because our plan is focused on all weak salmon runs in the Columbia River system, not just the listed ones, we think we will be able to keep the budget impacts to a minimum over the long term by avoiding future listing of salmon under the Endangered Species Act.

BPA BUDGET

Next, let me comment very briefly on the budget needs of the Bonneville Power Administration. As outlined in our statement, Bonneville's financial condition has eroded this year due to prolonged drought. We have had the worst 2 years in our history and the second worst 6 years. And as we all know, you make electricity by falling water, and if the water is not there, neither is the electricity.

This underlines our need that Bonneville adhere to the 10-year financial plan that assures sufficient reserves and revenues to meet U.S. Treasury repayments. In a related matter, Bonneville has announced a program to contain costs, seek efficiencies, and become more competitive. We support this endeavor.

Since the program levels and cost are critical to the long-term competitiveness, we believe it is even more important for Congress, and particularly the Appropriations Committee, to continue to provide thorough review and oversight of all Bonneville activities.

In closing, Mr. Chairman, let me again thank you for giving us the opportunity to testify on the Federal budget issues. We appreciate your leadership in Congress and the careful consideration that this committee has always given the needs of the Pacific Northwest.

[The statement follows:]

STATEMENT OF R. TED BOTTIGER

Mr. Chairman and members of the subcommittee, my name is Ted Bottiger, and I am vice chairman of the Northwest Power Planning Council. The Council was authorized by Congress in 1980 and created as an interstate compact by the states of Idaho, Montana, Oregon and Washington. Its purpose is to develop a 20-year regional electric power plan to ensure the Pacific Northwest an adequate supply of power at the lowest possible cost. The plan is designed to ensure that the region only acquires resources it needs and that it acquires the lowest-cost resources first. The Council also was directed to develop a major program to rebuild fish and wildlife resources that have been harmed by hydroelectric development in the Columbia River Basin. The Council carries out its responsibilities under the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Public Law 96–501).

I appear today to present testimony on the fiscal year 1994 budgets of five federal agencies. At the time this testimony was prepared, the budget requests had not been finalized. So my testimony today comprises general comments on important work elements that I believe need to be funded and undertaken by these agencies in the coming fiscal year. The five agencies are the Army Corps of Engineers, Bonneville Power Administration, Bureau of Reclamation, and the National Marine Fisheries Service and U.S. Soil Conservation Service. The last two are within the jurisdiction of other appropriations subcommittees.

Our interest in these budgets stems from the fact that each of these agencies implements, finances or regulates activities that are a part of the Council's Northwest Power Plan and Columbia River Basin Fish and Wildlife Program. Both the Council's power plan and its fish and wildlife program were developed under the mandate of the Northwest Power Act. In this Act, Congress provided direction and the framework for the Council as a policy and planning body to implement its actions through these federal agencies. The ability of these agencies to meet their objectives under the Act is tied directly to their funding levels and budget priorities.

CORPS OF ENGINEERS

Again this year, one focus of our testimony is on the need to reduce salmon and steelhead mortality as these young fish migrate down the Columbia and Snake rivers. The Corps of Engineers budget should contain full funding for continued testing and installation of new or improved mechanical bypass systems and related transportation facilities at the mainstem dams—Lower Granite, Little Goose, Lower Monumental, McNary and Ice Harbor dams on the Snake, and John Day and The Dalles dams on the Columbia. The Council supports the budget amount of $48 million. which would be approximately the same level of funding as in fiscal year 1993.

This amount also is sufficient to pay for actions called for in the Council's Strategy for Salmon, which is part of the Columbia River Basin Fish and Wildlife Program. The Council completed work on the salmon strategy in September 1992. Since 1987, when the Council helped develop a regional consensus on the urgent need to complete fish bypass facilities at the mainstem dams, the completion date has slipped. But Congress has supported the program and continued funding for this important work. Originally, 1994 was the target completion date. Today, it is 1998. The Council believes the completion date must not be allowed to slip again, particularly in light of the declining salmon runs and the endangered species listings by the National Marine Fisheries Service.

Among the items included in the $48 million total of particular interest to the Council are extended length screens at John Day and additional funding for biological testing. An important component of the Council's salmon strategy, a component not included in the Corps' juvenile salmon bypass program, is testing and design of extended-length screens for the turbine intakes at John Day Dam. This work should begin in fiscal year 1994. This work is supported by the National Marine Fisheries Service and would cost about $1 million. In fiscal year 1994, the Corps may undertake biological tests to evaluate various strategies for drawing down reservoirs behind the lower Snake reservoirs to move migrating juvenile salmon more quickly to the ocean. In fact, the National Marine Fisheries Service already has requested such tests. The Corps estimates the cost at about $5 million. We believe Congress should appropriate funds for these biological tests. Finally, the Council wishes to assure that the Corps is able to continue feasibility and design work on both transportation and reservoir drawdown alternatives. Rebuilding weak salmon runs may require that the region employ either or both tools in different conditions to improve survival of migrating smolts.

BONNEVILLE POWER ADMINISTRATION

The Bonneville Power Administration is the primary implementor of the Council's power plan and fish and wildlife program. Several issues regarding Bonneville are particularly important to the Council:

Ten-year financial plan.—Since adoption of the fiscal year 1993 budget, Bonneville's financial condition has eroded. Revenues from sales have dropped, primarily due to low water conditions and weak aluminum sales. Expenses have increased with the need to purchase power to meet loads. Bonneville's financial reserves have dropped to dangerously low levels. From a level of about $900 million at the beginning of fiscal year 1992, Bonneville estimates that the reserves could dip below $100 million during the first quarter of fiscal year 1994.

In January, after two years of effort, Bonneville released its financial plan which is designed to address long-term financial issues, and to develop strategies to enhance Bonneville's long-term competitiveness. Bonneville is adopting a policy of achieving, within each two-year rate period, a 95-percent probability of meeting U.S. Treasury payments by maintaining sufficient financial reserves. These financial reserves, expected to be maintained at $535 million on average, are the cornerstone to ensure Bonneville's ability to repay the Treasury and protect program stability.

In addition, Bonneville is adopting both an Interim Rate Adjustment and a Program Deferral Policy. If financial reserves fall below $245 million in the first year of the rate period, then a one-year rate increase of not greater than 10 percent, about $250 million, would be triggered. In regard to program deferrals, if triggered by low reserves, Bonneville also would reduce levels or defer spending by $25 million.

We support Bonneville's intent to adhere to the 10-Year Financial Plan and maintain adequate financial reserves to ensure a 95-percent probability of repaying debt to the U.S. Treasury. If revenues fall below its ability to sustain adequate reserves and maintain program levels, the proposal for an interim rate increase is a prudent response.

Bonneville's stability and reliability as a power marketer in the region is critical. The commitment to helping the region use electricity more efficiently and to protect our fish and wildlife resources is also important. Consequently, the Council continues to encourage Bonneville to secure in new power rates the revenues needed to maintain reserves, and adequate revenues to implement both the 1991 Northwest Conservation and Electric Power Plan, and the Columbia River Basin Fish and Wildlife Program, including the Strategy for Salmon.

Although Bonneville's capital program spending does not impact rates as much as current operating expenses, it is a key to long-term competitiveness. Bonneville must make cost-effective investments in capital programs today to provide for a least-cost future. It is critical to maintain adequate long-term investments in three principal areas: transmission, conservation resources, and fish and wildlife. Bonneville plans to finance most of its capital program in the next nine years through bonds issued to the U.S. Treasury, i.e., borrowing authority. Based on current capital investment projections, investments totalling $5.2 billion during the fiscal years 1992 to 2001 will be financed with this funding source: $3.75 million in transmission construction, $1.12 billion in generating and conservation resources, and $312 million in fish and wildlife improvements. Based on current assumptions, the $2.5 billion transmission borrowing cap will be reached at the end of fiscal year 1997. The conservation borrowing cap of $1.25 billion is projected to be reached during fiscal year 2002. By 1998, Bonneville will need an increase in its total $3.75 billion Treasury borrowing cap to maintain Treasury bonds as a viable financing option. The Council supports adequate federal borrowing levels and also the increased use of third-party debt financing, particularly tax-exempt financing, to help reduce capital program costs and delay imposition of federal debt-ceiling limits.

While we are on the subject of these three capital-financed areas, the Council would also like to stress that Bonneville investments in the transmission system should be exposed to the same level of public oversight as investments in conservation and fish and wildlife. Conservation and fish and wildlife expenditures and priorities undergo broad and detailed analysis by customers and by the public at large. But transmission investments, which account for more than 70 percent of total future capital costs and a significant portion of operating expenses, are not subject to the same level of review. We urge Bonneville to open to at least the same level of scrutiny all of its current and future transmission activities and planned expenditures. We support the current plan for a group of Bonneville customers to examine both near-term and long-term transmission costs. This effort would help Bonneville and the region set priorities for long-term investments in transmission.

Bonneville has announced a program to contain costs, including administrative costs, seek efficiencies and become more competitive. The Council supports Bonneville in this endeavor and pledges to undertake similar actions on our own behalf. Since program levels and costs are not a subject of the upcoming rate case and are critical to long-term competitiveness, it is even more important for the Congress, particularly the Appropriations Committees, to continue to provide thorough review and oversight of all Bonneville activities.

Bonneville's future budgets may include a proposal to alter Bonneville's method of repaying its debt to the U.S. Treasury for construction of the region's hydropower and transmission system. The Council continues to oppose changes in the existing repayment policy.

Fish and wildlife program.—Bonneville's proposed fish and wildlife budget is expected to be adequate to implement the Council's Columbia River Basin Fish and Wildlife Program. The Council completed a comprehensive set of amendments to the program regarding salmon and steelhead and now is working on amendments regarding resident fish and wildlife. Bonneville repeatedly has indicated support for the Council's amended program. We believe the agency has enough funding and flexibility in its budget to accommodate these needs.

Energy conservation.—The Council's 1991 Northwest Conservation and Electric Power Plan calls on the region to acquire at least 1,500 megawatts of energy conservation to meet the region's growing demand for power during the next decade. Bonneville and its public utility customers share of this goal is at least 660 megawatts, and they will require energy conservation budgets adequate to assure capturing all "lost opportunity" resources and to increase conservation acquisition activities to a level that will allow Bonneville to meet its share of the regional goal. Bonneville appears to be on a path leading to attainment of its goal. There are, however, recurring reports that some utilities may be unable to capture all lost opportunity resources in 1993, and there may be continued problems in 1994. The Council intends to continue working with Bonneville to ensure adequate support for efficiency measures.

Bureau of Reclamation

The Bureau of Reclamation budget should include adequate funding to continue construction of the Umatilla Basin Project in Oregon. The project involves pumping water from the Columbia River to supply irrigation districts so that those districts will leave water in the Umatilla River in order to rebuild salmon populations. In fiscal year 1994, an additional $11.5 million will be needed.

The Council also is concerned about adequate funding for another Bureau project, construction of water temperature control facilities at Hungry Horse Dam in Northwestern Montana. These facilities will help control water temperatures downstream from the dam, improving conditions for resident fish populations. This should result in substantial and immediate benefits to the damaged fishery. The Bureau intends to complete the design of these selective withdrawal structures in fiscal year 1993. Construction will require about $7 million in fiscal year 1994.

Finally, the Bureau's budget should include about $2 million for water conservation projects in Idaho's Lemhi River Basin, Washington's Yakima River Basin and Oregon's Grande Ronde River Basin. These projects are designed to make more water available for key salmon stocks and improve spawning and rearing habitat. In addition, the Council's amended fish and wildlife program calls on the Bureau to continue the investigation and appraisal of upper Snake River water storage sites that could provide augmented flows for salmon. This work is estimated to cost $200,000 in fiscal year 1994.

National Marine Fisheries Service

In 1993, for the first time in 11 years, the Administration budget proposed to fund the Mitchell Act hatcheries—25 hatcheries that now release more than 100 million juvenile salmon and steelhead into the Columbia system each year. These hatcheries produce 50 to 70 percent of the salmon released into the Columbia River. Mitchell Act funds also support a series of fish passage facilities in the basin, such as ladders for adult fish and irrigation diversion screens to protect juvenile fish. The 1993 budget includes $15 million for hatchery operations and rehabilitation, and $3.5 million for fish screens. The Council's amended fish and wildlife program notes that these screens are vital to fish survival in many tributaries, particularly in those upriver tributaries that support threatened spring chinook salmon.

We support adequate funding for both operation and maintenance of the Mitchell Act hatcheries and for the fish screen program, including $5 million that will be needed for screens in fiscal year 1994. From 1983 through 1992, federal appropriations for Mitchell Act hatcheries came only after Congress added money to the administration budget requests, which each year included no funding for the hatcheries. We urge you to continue your support for these vital activities. To use the funding provided in 1993, the region fishery agencies prioritized a list of screening needs on streams with declining salmon runs. They have coordinated the design, fabrication and installation of the screens for efficient use of the funding, and are prepared to take advantage of additional funding in 1994.

Soil Conservation Service

We also would like to mention the U.S. Soil Conservation Service, which is in the Department of Agriculture. The Council has identified the Soil Conservation Service and its related state and local soil and water conservation agencies, as having key roles in enhancing habitat for salmon and steelhead. This is because private landowners control about 40 percent of the remaining habitat in the Columbia River Basin. Many of the habitat problems that occur in the stream system, on riparian lands and in watersheds can be solved or greatly improved by the cooperative efforts of the Soil Conservation Service and local landowners. The Service brings expertise, an established planning process and, perhaps most important, credibility to the habitat problem. The Service has a well-established system for delivering assistance through its state and county affiliates. The Service also provides technical support for developing habitat restoration plans on private lands as part of watershed planning efforts initiated by the Council in Washington, Idaho and Oregon. To provide technical and financial assistance for a fish protection plan, the agency could utilize up to $8 million in fiscal year 1994.

Salmon recovery actions

In September 1992, with completion of amendments to the Columbia River Basin Fish and Wildlife program regarding salmon and steelhead, the Council effectively completed a comprehensive regional salmon recovery program. Ours is a recovery program for all salmon and steelhead in the Columbia River Basin, not just those being protected under the Endangered Species Act. We gave our amended program, which we call the Strategy for Salmon, to the National Marine Fisheries Service. The Service indicated the Salmon Strategy would form the foundation of recovery plans being developed for Snake River salmon runs. Our staff continues to work closely with the Service and its-recovery team.

We remain confident that this regional recovery program such as ours. developed with broad public involvement, will help the Northwest avoid the sort of draconian measures we have seen imposed in California, where Sacramento River irrigation water withdrawals have been reduced severely to protect endangered winter chinook salmon. The regional plan sets in motion immediate and significant actions to reverse the decline of weak salmon runs in the Basin and protect the biological diversity of the Basin's salmon stocks.

As we testified to you last year, we believe that salmon recovery actions will result in significant impacts on the current and future budgets of federal agencies under the jurisdiction of this subcommittee, as well as those of the federal land management agencies—the U.S. Forest Service and the Bureau of Land Management. Most of the cost of the regional salmon recovery program however, will be paid by the electric ratepayers of the Pacific Northwest. By implementing a regional plan that focuses on all weak salmon runs in the river system, regional and federal budget impacts will be minimized.

Mr. Chairman, thank you for this opportunity to share our concerns with you. We sincerely appreciate the thorough consideration that this subcommittee has given to the needs of the Pacific Northwest.

IMPLEMENTATION OF SALMON RECOVERY PROGRAM

Senator HATFIELD. Thank you, Mr. Bottiger.

Mr. Etchart, do you have any comments you wish to add?

Mr. ETCHART. I do not.

Senator HATFIELD. We are grateful for your presence here. Please feel free to engage in any colloquy that we have here.

Mr. Bottiger, I would like to make two observations and then ask a question. As you well know, when we created this Northwest Power Planning Council there were those who were rather pessimistic and there were some who were more optimistic. I think we all agree though that it was a fragile type of regional coalition, at least as it started.

There are those who would say that there is evidence today that the coalition is splintering, or is becoming more fractionalized, because of the strategy for salmon. We are seeing this dreaded litigation that has beset us in our attempts to solve other regional problems in natural resources. We hear more and more from individuals and organizations that are only seeking to implement that part of the council's plan with which they agree.

Mr. BOTTIGER. And suing on the other hand.

Senator HATFIELD. And suing on the other hand, and so just to build the record this morning would you care to expand on your suggestions or views on how the council's salmon strategy could be implemented in full?

Mr. BOTTIGER. Senator, as you know we are tracking each of the programs and the lead agency that is responsible for them. And we understand that the congressional staff considers that good monthly reading, to see how the implementation is going. We know that calls come from the congressional staff back to agencies that are not keeping up. So, you are helping us implement the plan.

There is no question that there is some fractionalization. There is at least one State that pushes a portion of the plan that the other three think has to be tested first, but that will smooth over in time. I do not think we are breaking apart but we are flexing muscles on occasion.

IMPACT ON POWER SYSTEM

Senator HATFIELD. Do you have any estimates on the impact of your salmon recovery plan on both firm and nonfirm hydropower resources in the Columbia and Snake Rivers?

Mr. BOTTIGER. Yes, sir; the estimate is that we are costing the firm power system about 70 megawatts in the average water-year, and that is the trick question. We are not in an average water-year and it will be higher this time.

The expense of refilling or replacing that by purchasing out of the region when we have a drought situation varies from nothing—or, I guess, $10 million last year—to an excess of $200 million this year, and it is because of the nature of the condition of the reservoirs. Last year they were fairly full. This year they are not.

Senator HATFIELD. And you had a cold snap from mid-January to mid-February, which provided another $100 million outside purchase.

Mr. BOTTIGER. Right; and we had a depression in the aluminum prices which caused some aluminum companies not to start their pot lines back up. This is a complicated subject and there is not a single solution that fits each year. We have to play a year at a time.

BPA COST CONTAINMENT MEASURES

Senator HATFIELD. One last question I have. You mentioned the Bonneville initiating programs to contain its costs, seek more efficiencies, and become more competitive. To what degree do you expect the council to be involved in this process with Bonneville?

Mr. BOTTIGER. Mr. Hardy has asked the council to review priorities with him in both the conservation as well as the fish and wildlife programs to prioritize them so that we can candidly let some slide where that would be possible without the Endangered Species Act, I guess, raising its head. We have got to sort out the ones that clearly are required by the current Endangered Species Act program.

Senator HATFIELD. Senator Gorton, do you have any questions you wish to ask?

COLUMBIA RIVER OPERATING CRITERIA

Senator GORTON. Ted, we keep hearing rumors about the river operating plan for this year. What differences, to the extent that you know, are there between the council and the National Marine Fisheries Service?

Mr. BOTTIGER. We regularly talk to them, and they came in and reviewed how we had arrived at the operation plan at the water budget. I thought when they left they were convinced that we had turned over every rock and had used every drop of water. John can tell you the conditions of the reservoirs in Montana. There is not any there.

So, if somebody is asking to substantially increase the summer flows, as I hear the rumor is, I do not know where they are going to find the water unless they can get it out of Canada. That is the only place you can find that kind. They have political problems up there too, Senator Gorton. I know some local legislators whose reservoirs are dry and you are not going to talk them into more water.

Senator Gorton. I am sure of that. I have a question for each of you—and I would be happy to have your views on this as well. You referred to the fact that you have what we might call spirited discussions in the council between representatives of the four States, and that there are and have been some differences.

I would just like to ask each of you, if you are willing to answer, what your personal opinions are on the relationship between existing good science, to the extent that you know what that science is, and the relationship between increased flows and improved salmon survival. Are either of you convinced that there is a cause and effect relationship between the two?

Mr. Bottiger. Senator, I am convinced there is a cause and effect between the flow and the survival of salmon. What I am not convinced of is where it tapers off and becomes insignificant. Clearly, when we have had flows of 40 $\mathrm{ft}^3/_\mathrm{s}$ in the Snake River, we have had bad fish survival. When you are up around 85 to 90, it appears that there is no more benefit for going above that.

But what I am most disturbed about is the failure to take the testing that the council has been calling for since 1982 by the agencies and tribes to find that magic point at which flows no longer add to the survival of fish. That has not been done.

The council, NMFS, and Bonneville are asking for flows in this year, and the Washington Department of Fisheries has volunteered the fish to do the first—what we call the William Simanski study of where that magic number is; trying to find a base line.

Senator Gorton. Mr. Etchart, do you agree with that?

Mr. Etchart. Senator Gorton, in the first place I am a brand new council member, so probably not a fully qualified observer. At the same time, I represent the State of Montana just since Governor Rosco took office. So, if there are factions on this question, by virtue of the fact that Montana does not have anadromous fish and does not benefit to the same extent that the downstream States do, I suppose we are part of one of the factions.

Speaking for my colleague, I think we hold the same skepticism that Vice Chairman Bottiger voiced. When we are talking about expenditures of the kinds that are involved with either enhanced flows or drawdowns and so on, we just want to make sure there is a high certainty of a return for the investment. And I guess that would be our point of view.

Senator Gorton. It sounds to me like we haven't learned very rapidly. I appreciate your answer. Thank you both.

STATEMENT OF DAN JAMES, GOVERNMENT RELATIONS MANAGER, PACIFIC NORTHWEST WATERWAYS ASSOCIATION

Senator HATFIELD. Thank you, gentlemen. At this time, I would like to invite Mr. Dan James of the Pacific Northwest Waterways Association to come and give his statement.

We are running about 2 minutes behind, which is a record for this committee. I would like to invite the Senators and Governor of Utah to join us at the table.

Mr. James, thank you for being here this morning. We are happy to have your entire statement placed in the record. And if you would care to highlight it, we would be happy to hear from you.

Mr. JAMES. Thank you, Senator Hatfield and Senator Gorton. I am fully aware that I am sitting before several distinguished Members of the Senate, so I will keep my comments especially brief so they can move on to their constituents.

As you know, PNWA does represent ports, tug and barge lines, river shippers, utilities, manufacturers, and agriculture and forest product producers along the Columbia/Snake River system and throughout the Pacific Northwest.

TEST DRAWDOWN CLAIMS

Our members wish to thank the committee for the $2 million appropriation to compensate for costs of repair, relocation, restoration, and protection of public and private property as a result of the March 1992 Snake River test drawdown.

The procedures for filing and processing claims resulting from the test were published in the March 26 edition of the Federal Register. We look forward to a fair and expeditious resolution of filed claims.

Senator GORTON. Have you actually gotten any of the money? Has any of it been released?

Mr. JAMES. Yes; the money has been released, but the procedures for filing were just released, and we understand that a number of the claimants have already filed their claims.

Although the fiscal year 1994 budget has not yet been released, as we discussed, we wish to express our support for ongoing construction, operations, and maintenance for the federally authorized navigation channels in the Columbia/Snake River system, the Washington and Oregon coastal ports, and Puget Sound.

And I do wish to associate my comments with those of Mr. Thorne, and Mr. Turnyik and his colleagues. They are members of PNWA and we all do work very closely together.

FUNDING REQUEST FOR 1994

We do ask for full funding for the feasibility study of the lower Columbia River channel deepening project. That is something that we can demonstrate benefits the region—full operations and maintenance of the region's hydropower system.

Full funding for rehabilitation of the Bonneville Dam powerhouse. Continued funding of the U.S. Department of Energy cleanup at Hanford. Full funding for the development of a Puget Sound sediment disposal plan. Selected salmon recovery actions such as improved and enhanced smolt transportation, screen and other smolt bypass facilities, habitat restoration and protection, and predator control.

And there are several other issues that we wish to raise with the committee this morning. We are opposed to appropriations for a one-dam drawdown test at John Day or Lower Granite until there is scientifically based justification of biological benefits for salmon.

We support the continued operation of the Corps operated hopper dredges and oppose efforts to reduce the work of the Corps dredges. Finally, we support the Corps reorganization plans to increase effectiveness and reduce costs. We support locating the Western Division of the Corps of Engineers in Portland as has been suggested. But we are opposed to the proposed shifting of Walla Walla District staff, which is working on the Hanford cleanup and salmon recovery program, from Walla Walla to Seattle.

On behalf of the 149 members from throughout the Pacific Northwest I would like to thank Senator Hatfield and Senator Gorton for giving us this opportunity to appear before you this morning. Thank you.

[The statement follows:]

STATEMENT OF DAN JAMES

The Pacific Northwest Waterways Association (PNWA) is a regional association that has been working for 59 years to maintain the multiple use concept in the development and management of the Northwest region's natural resources, including those of the Columbia/Snake River System.

PNWA membership includes 149 organizations and individuals in Oregon, Washington, Idaho, and Northern California. PNWA represents:

—Public port authorities on the Pacific Coast, Puget Sound, and Columbia/Snake River Systems;
—Public utility districts, investor-owned utilities, and direct service industries;
—Irrigation districts;
—Grain growers, grain grower cooperatives, and upriver elevator companies;
—Major manufacturers in the region;
—Forest products industry manufacturers and shippers; and
—Transportation providers, consulting engineers, and other users of the Columbia/Snake River System.

PNWA has a long history of working with the Committee and the U.S. Army Corps of Engineers on projects of regional and national importance, sharing the challenge to maintain and develop our transportation infrastructure. Although the fiscal year 1994 budget has not yet been released, we wish to express our support for several important programs and projects which will soon be reviewed by the Committee.

First, our members wish to thank the Committee for the $2 million appropriation to compensate for costs of repair, relocation, restoration, and protection of public and private property as a result of the March 1992 Snake River test drawdown. We have been told by the Corps that a notice will soon be published in the Federal Register which will outline guidelines for the Corps' Walla Walla District office to implement procedures for processing damage claims from property owners.

Operations and maintenance for navigation

We ask the Committee for full funding for ongoing operations and maintenance (O&M) of the federally authorized navigation channels in the Columbia/Snake river system, the Washington and Oregon coastal ports, and Puget Sound. Although funding for the O&M budget has remained flat in recent years, the cost of completing this work is rising due to a greater emphasis on environmental protection. Fully funding O&M would be a cost-efficient means of fully utilizing the federal government's investment in channel operations.

Operations and maintenance of the region's hydropower system

We ask the Committee to support the maintenance of existing public and private hydropower generating capacity and the development of new environmentally sound hydropower generating capacity in the region. In particular, we ask the Committee to continue to fund the rehabilitation of Bonneville Dam's first powerhouse, and to fund the rehabilitation of the powerhouse at The Dalles Dam.

Columbia River deep draft channel deepening

The Columbia River deep draft channel is the lifeblood of the Columbia/Snake River System. To protect future growth and development of the River System, we ask the Committee for full funding for the Corps' feasibility study of the lower Columbia River channel deepening project. This funding would pay for the federal government's share of the study to investigate improving the existing 40-foot navigation channel by increasing the channel depth to 43 feet. We are concerned that the costs of the feasibility study continue to rise, due in part to the number of reviews. We will continue to work with the Corps to try to alleviate this problem.

Hanford cleanup

We ask the Committee to continue to adequately fund the Department of Energy clean up of 45 years of accumulated defense waste currently stored at the Hanford site. We recognize that defense waste cleanup is a long-term project that will be most cost effective and most rigorously pursued if Hanford is a viable, operating site. Therefore, we strongly urge the Committee to support a complete, ongoing Hanford scientifically and technologically based research and operations program in order to ensure long-term funding for waste cleanup.

Puget Sound sediment disposal action plan

We support the Washington State Department of Ecology (WSDOE) request for an appropriation to allow the Corps to develop a Puget Sound Sediment Disposal Action Plan. In 1991 WSDOE completed a study of the utility and viability of establishing a multiuser site(s) for the disposal of contaminated sediments derived from Puget Sound cleanup and navigation dredging projects. As the next step in the process, WSDOE's study report recommended development of an Action Plan. The Action Plan would detail the disposal siting process, the institutional roles for the site, liability management plans, and site funding. We encourage the Committee to fund the development of the Action Plan.

Salmon recovery

We ask the committee to continue to fund salmon recovery actions that are biologically based and economically cost effective. These actions include improved and enhanced smolt transportation, screens and other smolt by-pass facilities, habitat restoration and protection, and predator control.

The transportation of juvenile salmon has been demonstrated as one of the most effective ways to increase the survival of weak salmon stocks. The National Marine Fisheries Service has completed studies which show that between 1.6 and 2.5 barged smolt return for every smolt that migrates in water. We also encourage the committee to support the development of improved transportation methods, such as the mobile net pen, as a significant element of the long-term recovery plan for weak salmon stocks.

We continue to oppose drafting reservoirs below minimum operating pool (or below minimum irrigation pool on the John Day reservoir) as a salmon recovery measure unless it is shown to be biologically effective and the least-cost alternative to restore wild salmon runs to meet the requirements of the Endangered Species Act. We are strongly opposed to a one-dam drawdown test at John Day or Lower Granite reservoirs, until there is a scientifically based justification for such a test. We encourage the Committee to resist calls for this $100 million dollar experiment until there is biological justification

Minimum dredge fleet

We expect that the Committee will be asked again this year to provide more work to the private dredging industry by reducing the work of the hopper dredges operated by the Corps. We strongly encourage the Committee to withstand pressure to further reduce the work of the public fleet. We oppose this effort because we believe it will ultimately lead to the total deactivation of the fleet.

Development of the public dredge fleet as it exists today is the result of many years' efforts to maintain and improve our nation's federally maintained navigation channels. U.S. taxpayers have millions of dollars invested in the Corps dredges. Their useful lives will last well into the next century. To deactivate all or part of the dredge fleet is, quite simply, a waste. Because they are large, complicated vessels, it could take months before mothballed dredges could be put into service to perform emergency work.

In regards to cost, over the last ten years we have seen numerous occasions when private industry bids were well in excess of the government estimate when no Corps dredge was in the area to perform the work. There is only one private hopper dredge based on the West Coast. All other private dredges capable of servicing smaller ports are owned by firms located outside the Pacific Northwest.

Emergency dredging is often required to restore the federal navigation channel to its authorized depth. Shoaling can occur very rapidly, and it has a potentially dangerous impact on export shipping and the sport and commercial fishing fleet. Shippers and ports cannot afford to wait several weeks for a private dredge to be diverted from another part of the country to do the work.

The coastal and river ports of the Pacific Northwest rely heavily on the response and capability of the Corps' dredges. Emergency dredging is often required to restore the federal navigation channel to its authorized depth. For example, the loss of even one foot of draft due to slow response can cost each grain vessel $324,000 in cargo value. Shoaling can occur very rapidly, and it has a potentially dangerous impact on export shipping and the sport and commercial fishing fleet. It is unclear if the private dredge industry has sufficient capacity and competition to adequately maintain the Columbia, Snake, Willamette and Chehalis Rivers to allow ships to take full advantage of the authorized channel, and to respond to the non-routine emergency dredging needs of small and medium sized ports on the Oregon and Washington coasts. The risk that they do not is unacceptable and potentially catastrophic.

Corps reorganization

Although we recognize that the Corps of Engineers reorganization plans are currently under review, we support the Corps effort to increase effectiveness and reduce costs. We support locating the Western Division in Portland as a wise and prudent consolidation effort. However, we are opposed to the proposed shifting of Walla Walla District staff working on salmon recovery and the Hanford Nuclear Reservation cleanup from Walla Walla to Seattle.

The support of the Department of Energy (DOE) in Hanford clean up and the recovery of the Snake River salmon are of particular importance to the region. The interagency agreement between DOE and the Corps allows DOE to secure technical and management expertise from the Walla Walla District. Since this agreement was signed in 1990, the size and agenda of the Walla Walla District has increased substantially.

The recovery of the Snake River salmon in a manner that is conducive to the variety of uses for which the Snake River projects were designed is of vital importance to us. We believe that the lead in addressing the Snake River salmon issues, particularly those species listed under the Endangered Species Act, should remain in the Walla Walla District. The District has experience in planning, designing, constructing and operating fish facilities. They have experience in the full range of fish facilities from hatcheries to fish barges.

Due to the Walla Walla District's expertise and location, we are opposed to any reorganization plan that shifts district staff working on Hanford and salmon to urban technical centers. We encourage the Committee to support the effort to expedite clean up at the Hanford site and valuable salmon recovery expertise by supporting the current staff levels at the Walla Walla district.

Conclusion

On behalf of 149 members from throughout the Pacific Northwest, we thank the Committee for giving us this opportunity to review a number of issues important to the environmental and economic prosperity of our region.

CHANNEL MAINTENANCE

Senator HATFIELD. Thank you, Mr. James. I have one or two brief questions. You mentioned about the $2 million to cover damages and for the port repairs resulting from the test drawdown on the Columbia River. We also included, as you know, $8 million in fiscal year 1992 for the Corps to maintain or dredge the navigation channel from Portland to Lewiston, or from Bonneville, I should say, to Lewiston.

Could you give me an estimate or do you have knowledge as to how adequate a job of keeping that channel open has been performed by the Corps?

Mr. JAMES. Senator Hatfield, let me first express the gratitude of PNWA and its 140 members in Oregon, Washington, and Idaho to this subcommittee and to the Appropriations Committee for appropriating these funds. The bulk of the dredging occurred in 1992 and had a significant impact on the ability of the ports and commercial facilities to maintain operations with reservoirs at minimum operating pool. The expenditure of these funds allowed the ports to carry on economic activity important to the communities they serve and to the Nation while improving conditions in the reservoirs for migrating salmon under the Endangered Species Act.

My overall assessment is that the Corps did a very good job in keeping the channel and the ports open. There were a few instances where the Corps overcame significant hurdles to accomplish the dredging, given the short leadtime and the limited dredge window on the Columbia and Snake Rivers. To our knowledge, all but one of the maritime cargo facilities were dredged. I am pleased to report that the one grain terminal in the State of Washington which should have been dredged in 1992 was dredged during the 1993 dredge window.

The most significant problem occurred due to inconsistent interpretation of the bill language between the Portland and Walla Walla Districts. Based on our interpretation of the intent of Congress, the Portland District correctly dredged public and private marinas and fish hatchery access channels, in addition to commercial cargo facilities. One marina in the State of Oregon was not dredged, but we have verbal commitments from the district and the division that it will be dredged during the 1994 dredge window.

The major concern was that the Walla Walla District chose a narrower interpretation of the language and dredged only commercial cargo facilities. They did not dredge public or private marinas. Several marinas in the State of Washington were affected by the Walla Walla District's decision. To our knowledge, the Corps has no plans to complete this dredging of marinas in Washington.

PREPARED QUESTION FOR THE RECORD

Senator HATFIELD. Senator Gorton, do you have any questions?

Senator GORTON. I have two or three questions, but in deference to our colleagues here I will submit them in writing and would hope that you would get those answers to us promptly.

Mr. JAMES. Thank you, Senator Gorton.

Senator HATFIELD. Thank you, Mr. James. I will now yield the gavel to the Senator from Arizona, Senator Deconcini.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

Energy and Water Appropriations Subcommittee Question to Dan James

Thank you for the opportunity to answer the written questions Senator Gorton provided to Dan James during the March 30 Hearing.

Senator Gorton: There have been ominous rumblings in the past few days about the river operating plan for 1993. From what you've heard, how would the plan rumored to be under consideration by NMFS affect your membership?

Dan James: There are two areas of concern regarding the rumors we have heard about the planned 1993 river operations. We understand that the reasonable and prudent alternatives will include increased flow targets for the Columbia and Snake Rivers and another one million acre-foot increase in the Water Budget. Utility analysts indicate that, given current river conditions, it may be impossible to meet the flow targets and attempting to do so would leave major reservoirs severely depleted. This would have a negative impact on recreation, irrigation in the Columbia Basin Project and resident fish, including petitioned sturgeon and bull trout. The utilities estimate that power generation losses would be 2,000 MWa, equivalent to two Trojans, and it would cost the Bonneville Power Administration an additional $200-300 million to replace that lost power. This is a concern, not just because of the cost, but because there appears to be little biological justification to demonstrate that these flows will increase survival of the listed species.

The second area of concern is that NMFS is rumored to be considering halting the smolt transportation program in 1994. Recent studies by NMFS have shown that transported salmon have from 1.6 to 2.5 times better chance of returning to spawn than non-transported salmon. Furthermore, NMFS, in their listing documents, stated that transportation improves the chances of survival. We believe that continuing and improving the transportation program is crucial to the survival of the salmon over the next several years.

Senator Gorton: Last year Congress appropriated $2 million to mitigate the impact of the 1992 Snake River drawdown test on river users. Has this money been released yet? If not, can this subcommittee help speed the process?

Dan James: PNWA first raised the issue of liability for damages associated with a drawdown test in March, 1991, one year prior to the test. In our November, 1991, comments on the Corps' draft EIS for the drawdown test, in which the Corps identified a high likelihood of physical damage from drawing down reservoirs below their design operating range, PNWA again requested the Corps to address the issue. The Corps did not respond at that time.

As damage was occurring during the drawdown test in March, 1992, property owners were told by the Corps that the Corps was not responsible for the damages. It was at that time, in March, 1992, during the drawdown test, that PNWA requested this subcommittee to appropriate funds to pay for damages resulting from the Corps' decision to draw down the reservoirs. PNWA appreciates the responsiveness of this subcommittee and the Appropriations Committee to the damage suffered by public and private property owners as a result of the 1992 drawdown test. Two million dollars were appropriated in the Energy and Water Development Act of 1992.

On March 26, 1993, one full year after the drawdown test and one full year after the public and private property owners suffered damages, the Corps announced in the Federal Register that it would accept claims for damages. We are not aware of any damage payments being made as yet, but we are pleased that the process is finally underway.

Our concern for the future is that, before any payments for damages from the 1992 test were made, the Corps and NMFS announced that there would be another drawdown test in 1994. While we have other concerns about drawdowns and drawdown tests, we believe the Corps should accept responsibility for damages resulting from possible future decisions to draw down reservoirs below their design operating range. The Corps should budget funds for the protection and repair of public and private facilities. And, the Corps should develop a timely mechanism to process claims for damages. Senator Gorton, although this subcommittee may not be able to help speed the processing of current claims, the subcommittee may be able to help ensure that the Corps has a responsive and timely process in place if its future budget requests include funds that will be used to conduct drawdowns or drawdown tests.

ADDITIONAL PREPARED STATEMENTS FOR THE RECORD

Senator HATFIELD. We have also received several statements covering other programs and projects in the Pacific Northwest which will be incorporated in the record at this point.

[The statements follow:]

STATEMENT OF CHIEF NELSON WALLULATUM, TRIBAL COUNCIL MEMBER, CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION, OR

Mr. Chairman, good afternoon. I am Nelson Wallulatum, a Tribal Council Member of the Confederated Tribes of the Warm Springs Reservation of Oregon and Chief of the Wasco Tribe. I appear before you today with two requests:

REQUEST SUMMARY

Add approximately $5,538,000 to the fiscal year 1994 appropriation to the U.S. Army Corps of Engineers Construction budget for the development of four Indian treaty fishing "in-lieu" sites on the Columbia River. The development of these sites is specifically authorized in Public Law 100–581, Title IV. The $5,538,000 addresses four sites: renovation of the Cascade Locks site in Oregon ($808,984); renovation of the Lone Pine site in Oregon ($1,635,133); renovation of the existing Underwood site in Washington ($1,067,054); and complete development of a new Bonneville Area Office site in Washington ($2,026,319).

Please note that the figure of $5,538,000 is based on a total cost of $5,224,049 as of October, 1991, approximately adjusted for two years of inflation (x 6 percent). Individual site amounts also include a 6 percent adjustment. Exact costs reflecting alterations in site design and inflation will have to be brought up to date by the U.S. Corps of Engineers.

Section 401(c) of P.L. 100–581 requires that these appropriations be treated and allocated as Corps of Engineers project costs for the Columbia River projects.

Add $5 million to the U.S. Department of Energy to initially fund the Tribal energy assistance program authorized in Section 2606 of the Energy Policy Act of 1992 (PL 102–486), with $1 million of that amount designated for continued feasibility testing on geothermal resources on the Warm Springs Reservation. Our Tribes have just completed encouraging surface tests and now need assistance to move on to the expensive test drilling phase.

In-lieu fishing sites assistance

Mr. Chairman, since time immemorial, Indian people of what is now the Northwestern United States have fished the waters of the Columbia River. The river and its salmon have been the center of our culture and our principal source of sustenance and trade. This fishery has been of such importance that, when the Columbia River Tribes entered into treaties with the United States in the mid-1800's and settled on reservations located up tributaries to the Columbia, each Tribe retained in its treaty the specific right to continue fishing at its usual and accustomed sites on the Columbia.

Following the treaties, people of the Confederated Tribes of the Warm Springs Reservation of Oregon and other Columbia River tribes continued to actively exercise our rights to fish on the Columbia. In 1905, the U.S. Supreme Court ruled in *U.S.* v. *Winans* that the tribes' treaty rights to fish in our usual and accustomed areas includes the right of free and unencumbered access to those sites.

Then in the 1930's, the U.S. Army Corps of Engineers constructed Bonneville Dam, the first of what has become a long staircase of massive dams on the Columbia.

The reservoir behind Bonneville Dam inundated approximately forty traditional Indian fishing sites, destroying the houses, shacks, drying sheds and campgrounds located there. In 1939, the United States agreed to provide four hundred acres at six specific sites "in-lieu" of those submerged by the Bonneville reservoir. Five of those so-called "in-lieu" sites, totalling forty acres, have been established for the tribes on the Bonneville Pool. The United States never replaced our sheds and houses, and did very little to improve the sites. Highways, railroads and fences have made access to these sites difficult, often requiring passage through private lands and public parks, increasing tensions between the general public and the tribes and taxing those public facilities the tribal fishermen often have no alternative but to use. Inadequate maintenance has also caused the existing in-lieu sites to fall into serious disrepair.

In 1973, the prospect of additional tribal in-lieu fishing sites on the Columbia arose again. As part of a Federal District Court settlement between the tribes and the U.S. over a Federal plan to raise the reservoir behind Bonneville Dam,the Secretary of the Army and the Secretary of the Interior again pledged to provide more and improved in-lieu sites. Accordingly, in 1974, the Administration forwarded proposed legislation to Congress for the acquisition and improvement of additional sites. However, no action was taken by Congress, and until 1988, nothing more was done.

Because there were only five sites for tribal use on the river, they have been heavily used. Pick-up trucks with boat trailers take up considerable room, and space was needed to dry and repair our nets and camp overnight. The sites became very crowded, rundown, and unsanitary. Non-Indian sportsmen would also occasionally use our boat ramps, adding to the problems. With nice parks for the general public often nearby, and with the huge dams providing great amounts of hydroelectricity for the people of the Northwest, the failure of the U.S. to adequately provide in-lieu sites for the exercise of our treaty fishing rights caused us often bitter disappointment.

Then, in 1988, Title IV of Public Law 100–581 was enacted to fulfill the U.S. commitment for additional and improved in-lieu sites. The Act, through reference to an accompanying map, designates twenty three specific additional sites located on Federal land throughout the Indian fishing zone between Bonneville and McNary Dams on the Columbia River for use as Indian fishing sites. The Act provides that the Secretary of the Army shall improve these new sites with boat ramps, docks, camping and park facilities, all weather access roads, sanitation, fish cleaning, curing and ancillary fishing facilities, electrical and sewage facilities, and landscaping. Improvements are to be to the standards of the National Park System. The Act also provides that the Secretary of the Army shall acquire and improve at least six additional sites within the Bonneville Pool, as well as improve the existing in-lieu sites.

Since that Act, the four tribes have been painstakingly working with the U.S. Army Corps of Engineers to plan the improvement of the existing and new sites. Late last year, the Corps completed its planning for the first four sites, called "early implementation sites" because there are no questions about their exact boundaries and the sites themselves are among the easiest to improve. Three of these four sites are existing in-lieu sites that are to be rehabilitated, and one is a newly developed in-lieu site. The Corps calculated an October, 1991 budget of $5,224,049, or $5,538,000 when approximately adjusted for inflation (x 6 percent), for these four sites, but apparently is not going to include that budget request in its proposed fiscal year 1994 budget to be presented to Congress.

Accordingly, I come before you today to request that the U.S. Army Corps of Engineers Construction budget be increased by $5,538,000 to initiate a renewed U.S. effort to honor it commitment to the Columbia River Tribes.

Specifically, I request additional fiscal year 1994 U.S. Corps of Engineers Construction appropriations of:

—$808,984 for rehabilitation of the Cascade Locks site in Oregon ($763,193 x 6 percent);

—$1,635,133 for rehabilitation of the Lone Pine site in Oregon ($1,542,579 x 6 percent);

—$1,067,054 for rehabilitation of the Underwood site in Washington ($1,006,655 x 6 percent); and

—$2,026,319 for the development of a new Bonneville Area Office site in Washington ($1,911,622 x 6 percent).

These amounts are based on the Corps' amounts calculated as of October, 1991 and adjusted for two years of inflation at 3 percent per year. Exact figures, which may also reflect cost adjustments for design changes, should be sought from the Corps. As back-up material, I am submitting with this testimony a copy of the U.S. Army Corps of Engineers Phase One Interim Evaluation Report on Title IV Columbia River Treaty Fishing Access Sites, dated October, 1992.

It is important to note that Section 401(c) of Public Law 100–581 directs the Secretary of the Army to treat the cost of making improvements at new and existing sites as project costs of the Army Corps of Engineers Columbia River projects, and such costs shall be allocated in accordance with existing principals of allocating Columbia River project costs. Therefore, it is probably necessary to identify the additional appropriations in report language as being Corps of Engineers Columbia River project costs.

Add $5 million for energy's tribal energy assistance program

Section 2606 of the Energy Policy Act of 1992 (PL 102–486) authorizes the Secretary of Energy to make grants to Tribes "to carry out projects to evaluate the feasibility of, develop options for, and encourage the adoption of energy efficiency and renewable energy projects on Indian reservations." About eleven years ago, the Warm Springs Tribes completed the installation of an efficient, low-head hydroelectric generator at an existing dam on our reservation. More recently, we have continued to explore the energy potential of our land, including—as the name of our Tribes suggests—geothermal resources. Within the last year, we completed geothermal surface studies which were very encouraging and suggested we should move to the next developmental step—test drilling. However, this is a very expensive process, and despite encouraging signs, is beyond the Tribes' means.

Section 2606 seems to fit this need exactly. We have a successful record of energy development and have our own Tribal Power Enterprise. Geothermal electric generation is renewable and relatively environmentally benign. The Northwest, which was once thought to have an endless abundance of "clean" hydroelectric energy, is now searching for new energy sources as drought and difficulties with anadromous salmon highlight some of the problems with dams. Accordingly, we request that $5 million be added to the U.S. Department of Energy's budget for Section 2606 of the Energy Policy Act of 1992, and, to continue evaluating our geothermal resources, that $1 million of that amount be designated for the Confederated Tribes of Warm Springs to initiate geothermal feasibility drilling tests on our reservation. Our efforts to develop our geothermal resource are also supported by Bonneville Power Administration.

That concludes my testimony. The Tribes hope this committee will be able to provide these funds to renew the U.S.'s fulfilling its long standing commitment for Columbia River Indian fishing sites, as well as initiate the Tribal Government Energy Assistance Program. I would be happy to respond to any questions.

Thank you.

LETTER FROM SUE F. HICKEY, ASSISTANT ADMINISTRATOR, OFFICE OF ENERGY RESOURCES, DEPARTMENT OF ENERGY

Mr. Raymond Callica Sr., Chairman
Warm Springs Tribal Council
P.O. Box C
Warm Springs, OR 97761

Dear Mr. Calica:

In recent discussions with Jim Manion, we understand that the Confederated Tribes of Warms Springs is exploring the potential for geothermal development.

As you may know, Bonneville Power Administration (BPA) works in concert with the Northwest Power Planning Council and for our part BPA produces a Resource Program planning document every other year. In our most recent Resource Program, the 1992 edition, we projected a need to acquire 400 aMW of energy during the next few years. In 1994 or subsequent editions of the Resource Program, we expect that additional needs for generation resources will be identified.

We plan to follow a number of avenues in seeking these resources, including Billing Credits arrangements with our utility customers, power exchanges with other West Coast utilities, unsolicited proposals for renewable resources and cogeneration, and other mechanisms as may be required. BPA does have a continuing interest in geothermal generation as a viable, cost effective renewable resource of the future. As you know, we have actively pursued the development of the Pacific Northwest geothermal resource through a pilot program solicitation which has now resulted in letters of intent to do two 30 aMW projects. Our purpose in doing this pilot program is to prove out the geothermal resource in as many different areas as possible as well as to support "real live" projects producing power here in the Pacific Northwest.

As you have discussed with our Administrator, Randy Hardy, when he visited your area last fall, areas of Warm Springs may hold some potential for geothermal development. BPA follows with great interest your efforts to determine whether and how much potential there is for geothermal generation in the area. While we can't promise what our future resource needs will be or that we will be in a position to purchase any particular project, we look forward to the prospect of receiving cost effective power plant proposals from your Tribe in the future.

Sincerely,

Sue F. Hickey

Sue F. Hickey, Assistant Administrator
Office of Energy Resources

STATEMENT OF ALICE PARKER, EXECUTIVE SECRETARY, COLUMBIA BASIN DEVELOPMENT LEAGUE

The Columbia Basin Development League realizes that the President has not yet released his budget for fiscal year 1994 but we appreciate having the opportunity to present our comments regarding the needs for the Columbia Basin Project.

As you consider the Senate Budget we request that you include adequate funding to cover the ongoing program of constructing agricultural drains to relieve wet conditions on lands in the existing project. In 1962 after negotiations between the Bureau of Reclamation and the Project Irrigation Districts the landowners agreed to increase their construction cost obligations to the U.S. Government if the U.S. agreed to continue with construction of these drains. Therefore the Columbia Basin Development League joins with the Quincy, East and South Columbia Basin Irrigation Districts in requesting that the existing contract obligations be honored by providing adequate funding for continued construction.

The planned construction of these drains are scattered throughout the three irrigation districts and has been designed and programmed by the Bureau of Reclamation to be done during fiscal year 1994. If this construction is not done this land will become unproductive, making it difficult for landowners to continue to pay their construction and water assessments.

Adequate funding to reconstruct the WB10 Wasteway on the Wahluke Slope is also needed in the fiscal year 1994 Budget. This wasteway failed due to unstable foundation conditions soon after it was constructed. The Bureau of Reclamation and the Irrigation Districts have tried to repair the wasteway but have not been successful so it needs extensive work to stop the erosion problems that it is creating. It is important that this work be done this year before additional damage is done.

The Federal Government has made a huge investment in the Columbia Basin Project and that investment needs to be protected. The project is a benefit to the citizens of the United States. It produces approximately 70 different commodities. The 1991 Bureau Crop Report shows that over $577 million was the gross crop value. When using the multiplier of 5 the project is creating over $2.8 billion yearly.

We hope that you will make sure that this valuable asset will receive adequate funding so it can be maintained so it will continue to create the new and renewable wealth for this nation that it is capable of doing.

STATEMENT OF EAST COLUMBIA BASIN IRRIGATION DISTRICT

The East Columbia Basin Irrigation District requests that the Senate include funds in the Bureau of Reclamation's fiscal year 1994 budget for the Columbia Basin Project to construct agricultural drains and a portion of the WB10 Wasteway. Both these activities have been designed and programmed by Reclamation's Regional and Project offices for work during this budget period.

The agricultural drains planned for construction this year are scattered through the three Columbia Basin irrigation districts. Construction of these drains is necessary to control the water table on Project farms to keep them in agricultural production.

The majority of the agricultural drains needed for the Columbia Basin Project have already been constructed. This is reflected in the steady decline in our federal construction budget from over $17 million about ten years ago to current needs of less than one-fourth that amount. Some drain construction will continue to be necessary for several years to come. It takes many years for the artificial groundwater hydrology of a large irrigation project such as the Columbia Basin to reach a steady state. As the Project matures, relatively small drain systems, similar to the ones needed for fiscal year 1994 will need to be constructed to address wet conditions that were not easily foreseeable when the major drain systems were constructed.

Reconstruction of the WB10 Wasteway on the Wahluke Slope also needs to be done during fiscal year 1994. This facility failed shortly after its original construction because of unstable foundation conditions. Because of that failure, this channel was never transferred to irrigation district operation. Repair attempts by the Bureau of Reclamation and the irrigation districts have not provided a satisfactory fix. Substantial reconstruction is necessary to end serious erosion to adjoining federal lands and wildlife habitat areas.

STATEMENT OF THE CONFEDERATED TRIBES AND BANDS OF THE YAKIMA INDIAN NATION

The Yakima Indian Nation supports early implementation of "Phase One" of the Columbia River Treaty fishing access sites project. The establishment of these In-Lieu sites will ensure that our people will be able to continue to fish and practice aboriginal religious and cultural traditions on the Columbia River. Through Supreme Court case law and direction of the Congress of the United States, the Secretary of the Army (Secretary) has been directed to acquire, develop, and/or improve lands for Treaty fishing access along the Columbia River.

Members of Yakima Indian Nation have a tradition of fishing along the Columbia River that extends into prehistory. In the Treaty of June 9, 1855 between the Confederated Tribes and Bands of the Yakima Nation and the United States, ratified in 1859 (12 Stat. 951), the Yakima Nation reserved the right to fish at usual and accustomed fishing locations along the Columbia River.

Since the signing of the treaty, it has been the burden of the Yakima Indian Nation to prove in court those rights reserved within the treaty. In 1905, and again in 1919, these fishing rights and the Indians' rights of access to their usual and accustomed places were upheld by the United States Supreme Court. In 1905, the Supreme Court held, in *United States* v. *Winans*, that a treaty may reserve a tribe's right to hunt or fish off-reservation "at usual and accustomed places," and also found that a treaty "is not a grant of rights to the Indians, but a grant of rights from them—a reservation of those not granted."

In 1919, the United States, on behalf of the Yakimas, instituted action in the District Court of Oregon against the Seufert Brothers in a case involving Columbia River fishing. The District Court decided in favor of the Yakimas. It found sufficient evidence that the Indians living on each side of the river, ever since the Treaty was negotiated, had been accustomed to crossing to the other side to fish. The record also showed that the Yakima Indians were accustomed to using the locations described in the decree for the purpose of fishing at the time the treaty was entered into; and they continued to do so to the time of the taking of the evidence in the case. The case was appealed to the Supreme Court of the United States and the Supreme Court upheld the decision of the District Court.

In the 1930's, the United States began plans to build dams on the Columbia River which would inundate the Indians' fisheries. An agreement was negotiated in 1939 with the Indian tribes for the inundation of their accustomed fishing sites and approved in 1940 by the Secretary of War. The agreement called for the Government to acquire more than 400 acres of land at six described sites to serve as "in-lieu" fishing sites. The Corps was to make certain improvements thereon, and then turn the sites over to the Department of the Interior's Bureau of Indian Affairs to be administered for the permanent use and enjoyment of the Yakima Indian Tribes.

Since the inundation of our fishing sites, the Yakima Indian Nation has been waiting for the promises made to our ancestors by the U.S. Government to be fulfilled.

The Yakima Indian Nation has been working with the United States Army Corps of Engineers, Portland District, to ensure that Title IV of Public Law 100–581 is implemented. Our desire is to promote a good working relationship with those entities that are involved with the Columbia River. P.L. 100–581 has been an important stepping stone for improving relations. Title IV of that law directs the federal government to honor its past agreements with tribal governments by constructing in-lieu fishing sites for Indian people and ensuring proper access to them, as well as improvements such as docks, boat ramps, sewage facilities, etc.

We believe the cost for constructing/improving the first four sites (which the Corps has completed planning for) should be appropriated at $5,998,000, based on calculations made by the Corps of Engineers for the Bonneville Area Office, Cascade Locks, Lone Pine, and Underwood sites which were identified by the Corps of Engineers as Phase One sites. There are no uncertainties regarding the boundaries for these sites, and the Corps has identified them as being the least difficult to improve.

The Tribal Government of the Yakima Indian Nation strongly recommends that the requested funds be approved by the honorable members of the Senate Appropriations Subcommittee on Energy and Water Development, so that the federal government may fulfill its commitments made both when the federal dams first inundated our fishing sites, and more recently when Congress enacted Title IV of Public Law 100–581 to authorize the development of these fishing and access sites.

Thank you for your time and your consideration of our request.

CENTRAL UTAH PROJECT

STATEMENT OF HON. ORRIN G. HATCH, U.S. SENATOR FROM UTAH

Senator DECONCINI [presiding]. Next we will have testimony on the Central Utah project and we are pleased to be joined by Senator Hatch and Senator Bennett, along with Governor Leavitt of Utah.

Senator Hatch?

Senator HATCH. Thank you, Mr. Chairman. We appreciate the opportunity to appear before you today and to make several comments concerning fiscal year 1994 and our funding request for the Central Utah Project. And I am pleased to join my good friends from Utah in this effort, Governor Mike Leavitt and, of course, our fellow Senator Bob Bennett, and representatives from the Central Utah Water Conservancy District.

Privately, I have thanked the chairman and others on this subcommittee for their past support of CUP and their tremendous work in shepherding the Central Utah Project Completion Act through our Congress last year. Now, I would like to acknowledge those efforts publicly and to express my gratitude for your continued support of this measure. Without your assistance, Mr. Chairman, this would not have happened.

This year, our efforts can be focused on pursuing the orderly completion of CUP's component projects authorized by last year's omnibus reclamation bill. To ensure the timely completion of the various projects it is essential that appropriate funding be provided for development and construction.

FUNDING REQUEST

I understand that the President's budget will contain a request of $20.5 million for fiscal year 1994 and we appreciate that request. However, the district has budgeted $25.77 million for next year in order to stay aligned with its precise construction schedule. So, I would request, Mr. Chairman, the subcommittee add $5.27 million to the President's proposal for full and appropriate funding for 1994.

In his confirmation hearing last January, Secretary Babbitt stated that last year's omnibus reclamation bill, "Was perhaps the most important reclamation bill that has been passed by the Congress, certainly since the 1930's."

The Central Utah Project Completion Act is extraordinary because it establishes a different construction scenario for the CUP and creates a vastly diminished role for the Bureau of Reclamation in future construction. For these reasons, CUP has been labeled by many people as a model water project for the West.

Now, depending on one's particular interests, this could be either seen as a compliment or an insult. No matter which it is—and I believe CUP should be recognized as a positive model—Utah simply wants to develop her water in an efficient and forthright manner. And with passage of last year's legislation we have the method securely in place to enable us to do so. Now, we are asking for the means to accomplish this goal.

Mr. Chairman, full funding for CUP in fiscal year 1994 is warranted to meet the district's development schedule. So, I would ask that the subcommittee seize upon the momentum and good will established during the last Congress and meet the district's reasonable budget figure and add an additional $5.27 million moneys to the budget. I would really appreciate it if you would do that.

Senator DECONCINI. Thank you, Senator Hatch. You have talked to me many times about this program and I know this subcommittee takes your statement and support very seriously.

Senator HATCH. Thank you.

Senator DECONCINI. Senator Bennett, we welcome you here for the first of many times, maybe.

We are glad to receive your testimony.

STATEMENT OF HON. ROBERT F. BENNETT, U.S. SENATOR FROM UTAH

Senator BENNETT. Thank you, Mr. Chairman. If I may be allowed a personal note, as I was coming here to the hearing this morning my staff dug out of the file an old press release which was sent to me by J.D. Williams, my professor at the University of Utah who is now the Democratic National Committeeman from the State of Utah. It is embargoed for release on January 7, 1954, so I think we are safe in talking about it. It is a prediction that Utah and the West will figure prominently in the forthcoming session of Congress from Senator Wallace F. Bennett, Republican, of Utah.

Senator Wallace Bennett stated, "There is going to be a real debate on legislation to authorize the upper Colorado River storage project. I think we have a good chance to win this fight for Utah's future." So this is an issue that has been before the Congress for nearly 40 years. And I had a little bit of involvement with it when I served as my father's administrative assistant back in the sixties. And I am delighted to be here now in what I hope is the final wrapping up of this as we have finally come to what the chess player would call the end game with respect to the Central Utah Project.

Nonetheless, I recognize that this year may be the most critical year in the funding process for CUP, not in terms of the dollar amount because the request this year is quite low compared to other years, but because it is the first year under the newly reformulated Central Utah Water Completion Act. As Senator Hatch has said, the legislation has been held out as a model for modern western water projects. And in that capacity I think it deserves to get off to a fast start in the construction process. That is why I support the district's request for the $25.8 million.

Thank you, Mr. Chairman. I join with the others in expression our appreciation for your interest and assistance and look forward to a successful resolution.

Senator DECONCINI. Thank you, Senator Bennett.

Governor Leavitt, we welcome you here from your State. You certainly have a long history of involvement with western issues, and I know you do a lot of work with the Governor of Arizona. We look forward to hearing your testimony at this time.

STATEMENT OF HON. MICHAEL O. LEAVITT, GOVERNOR OF UTAH

Governor LEAVITT. Thank you, Mr. Chairman. I do have a written statement that I would like to submit for the record.

Senator DECONCINI. It will be in the record, without objection.

Governor LEAVITT. If I may very simply make my point, today it is, Senator—from your State's perspective you will understand the importance of this project to our State. It is our State's future life blood.

We acknowledge that we have entered now a new era in its development. It has been a very favorable relationship. Over the last 29 years we have badly needed the water and the Congress was willing to help us build it. We know now that we are in a period of time when we have to meet part of that obligation as a State. We are committed to it and support the basic philosophic approach that underpins that requirement. We are committed to funding our share, and our share this year is on the table.

I guess I have one simple message, Senator, and that is that we need the continued support of the Congress and we would ask for full funding of the $25.77 million that is in our request, and ask that $5.77 be added.

[The statement follows:]

STATEMENT OF GOV. MICHAEL O. LEAVITT OF UTAH

In 1964, people of vision and foresight created the Central Utah Water Conservancy District to administer the development of the various proposed units of the Central Utah Project. The purpose of the project was and is to develop Utah's portion of the upper Colorado River water for the benefit of 12 Utah counties in central and south-central Utah.

For 29 years since 1964, the State, district and Utah's congressional delegation have worked with Congress and the Federal executive branch for the authorizations and appropriations necessary to begin and continue construction of the project. During this time, individual features of the system have undergone periodic review, and have been altered in design to fit updated needs and to meet updated economic efficiency tests.

The 1990s are the time to complete the project. The need for the water has not diminished at all. Indeed, future growth is dependent on delivery of the project water. The completion process has already begun, with the approval of the Central Utah Project Completion Act by the U.S. Congress as part of a major reclamation projects act in 1992.

We want to congratulate the 102nd Congress for the passage of this historic act. I believe it sets the proper framework for the completion of the project. Also the local cost sharing features of the legislation provide a new model for the future in State/Federal regulations in the fiscal environment. Also the fish, wildlife, recreation and reclamation mitigation components are of particular strength.

The district, the State and the Federal Government must now work together to implement the act and complete the project. To move forward with the completion process we encourage you to appropriate $25,778,500 for fiscal year 1994.

LOCAL COST SHARING

Today, Federal monies are tight, and the Federal Government has required, as a condition to its further participation, that those who will receive the benefits of the project share in a significant percentage of the up front costs, with repayment of the remainder again allowed over time. The completion act requires that the citizens of the district now fund 35 to 50 percent of the design and construction costs on a concurrent or "as needed" basis. This means that the district and the State must find new sources of funding, however, because the existing sources are committed to the current debt and operating expenses.

New sources of funding are as difficult for the district and the State as they are for the Federal Government. The State must be sensitive to the total burden on the taxpayers and citizens who live here.

However, we believe the local cost sharing was an important component of the 1992 Completion Act and we are committed to developing a long term financial plan to meet the local cost sharing agreement.

The local share for the first year including first year mitigation account contribution are being contributed with existing funds.

The State has much accumulated experience in the financing and construction of infrastructure such as water delivery systems. Many financing tools are available, including bonding, property taxes, appropriations, water development funds or loans, water rate revenues, and so forth. The State is recognized as one of the best managed in the Nation, in part due to its judicious use of all of these financial tools.

The Governor, the members of Utah's congressional delegation, and the State legislature all unequivocally agree and state:

Policy

The State establishes the following policy as the process which meets the cost-sharing requirements of section 204 of the Central Utah Project Completion Act (Public Law 102–575):

—The State strongly supports completion of the Central Utah Project as offered by the Federal Government in the Completion Act. The State supports the ideas behind cost-sharing, and the evaluation of economic and environmental viability of the individual project features. The State also supports the other innovative ideas in the act, including the water pricing studies, studies of the project interrelationships, the requirement for water conservation, the establishment of the mitigation commission and account, and the settlement of the Uintah and Ute Indian Tribe claims.

—The district and the State will meet the cost-sharing obligations contained in the Completion Act for the portions of the project which meet the tests of economic and environmental viability.

—The district will make the mitigation account contributions for the first year.

—Matching funds for future Federal appropriations will be obtained from some or all of the financial tools available to the district and the State, which include for example, general State appropriations, bonding, property taxes, water development loans, water revenues, and so forth.

—The Governor will establish a broad based commission to set, in 1993, the long term financing plan for the non-federal share of costs. The commission will consider use of the various funding tools available, match the project features to a particular funding method, and review the methods of public oversight over any increase in taxing authority that may be considered.

ENVIRONMENTAL SUPPORT

Senator DeConcini. Thank you, Governor. Your Senators are great advocates for you here. Senator Hatch is relentless, as was Senator Garn, regarding this project. And I have familiarized myself with it probably a lot more than I really wanted to. It is a very needed project in my estimation.

As you know, or as you can appreciate, the amount of funds available are shrinking and we have to make priorities. I will do all I can to assist you as this committee proceeds. You have two great advocates for the project in this body.

Governor Leavitt. Thank you. We are committed to meeting our share, as well.

Mr. Chairman, could I just make one other comment?

Senator DeConcini. Of course.

Governor Leavitt. This project has one uniqueness that I think should be noted, and that is the support of the National Wildlife Federation, the Grand Canyon Trust, and the Utah Outdoor Interest Coordinating Council. I have a letter from them to the chairman of this committee that I would like to submit for the record, as well.

Senator DeConcini. That will also appear in the record.

[The letter follows:]

LETTER FROM EDWARD OSANN, NATIONAL WILDLIFE FEDERATION

MARCH 29, 1993.

Hon. BENNETT JOHNSTON,
Chairman, Energy and Water Development Subcommittee, Senate Appropriations Committee, The Capitol, Washington, DC.

DEAR SENATOR JOHNSTON: We urge you to fully fund the fiscal year 1994 request of the Central Utah Water Conservancy District (the "District") of $25,778,500 for the Central Utah Project (the "CUP").

The CUP Completion Act (the Act) is widely viewed as one of the most important environmental accomplishments of the 102d Congress and as a model for Reclamation reform.

Secretary Babbitt commended and expressed strong support for the reformed CUP in his confirmation hearings.

The recommendation of the Office of Management and Budget would cut the District's funding requests for several studies and projects that are essential to reforms contemplated by the Act. For example, the Wasatch County Water Efficiency Project (Sec. 202 (a) (3)) and Water Management Improvements (Sec. 207 (e) (1)) were cut $877,800 and $700,000 respectively. The Provo River Studies (Sec. 202 (a) (5)), cut by $2 million, are foundational and intended to guide the decision of whether or not to spend an additional $180 million (Federal share) on an Irrigation and Drainage System for the Project.

We are following the progress of the new CUP closely and provided input to the District's fiscal year 1994 request. The District has not requested any funds it is not prepared to spend efficiently. Full funding of the District's request is important to comprehensive implementation of the reforms intended by the Act.

There is a larger purpose served by fully funding the CUP for FY94. Water development and environmental interests nationwide are watching to see what the funding response will be to the CUP's fiscal and environmental reforms. Please consider the full import of the message you will send with your FY94 budget decision.

Sincerely,

EDWARD OSANN,
National Wildlife Federation.

EDWARD M. NORTON, Jr.,
Grand Canyon Trust.

JEFFREY W. APPEL,
KENLEY BRUNSDALE,
Utah Outdoor Interest Coordinating Council.

STATEMENT OF ROSCOE GARRETT, CHAIRMAN OF THE BOARD, CENTRAL UTAH WATER CONSERVANCY DISTRICT

Senator HATCH. Mr. Chairman, would it also be possible to have Mr. Roscoe Garrett of the Water Conservancy District make a few remarks?

Senator DECONCINI. Very, very briefly. We have a very short time, but we would like to hear from you.

Mr. GARRETT. You have a short time and we will take only a short time. These gentlemen have covered the subject very well.

I would like to remind you that we have been coming back here for 29 years. I think perhaps we would have given up if we had not been so desperate.

Let me quickly explain. I once had a horse that kept going lame. I took him to the vet and then he would get all right. I took him to the vet and said, "What is wrong with him?" He said he keeps going lame and he looked him over. I said, "What should I do?" And he said, "Well, sell him when he does not limp."

And I think we are back here with a project that does not limp. We do not have any adverse influence. I think now is the time to sell the horse and get it on its way and get the project built.

Thank you.

Senator DECONCINI. Thank you. That is a good statement, not only because it was short, but it was very, very, very much to the point. Thank you, very much.

Mr. GARRETT. Well, thank you, Mr. Chairman.

Senator HATCH. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF ROSCOE GARRETT

Mr. Chairman and Members of the Committee, my name is Ross Garrett, and I am the Chairman of the Board of the Central Utah Water Conservancy District. I am accompanied today-by members of our Board: Leo Brady, Jerry Maloney, Ron McKee, and Claude Hicken. Also with me is the District's General Manager, Don Christiansen and the District's Administrative Assistant, Betty Sersland. I am particularly pleased that our state's new governor, Governor Leavitt is with us today. All of us at the District are grateful that he has taken the time to come to Washington to testify in support of the Central Utah Project.

I appreciate having the opportunity to testify on the Bureau of Reclamation's fiscal year 1994 Budget for the Central Utah Project. Initially, let me thank you and the Members of the Committee for the strong support which you have always given our project. Additionally, I would like to thank the Members of the Utah congressional delegation for their dedication and commitment which last year resulted in the enactment of the Central Utah Project Completion Act—one of the most significant pieces of legislation affecting Utah ever.

This landmark piece of legislation contains important water development and environmental enhancement features. It allows for the completion of the Irrigation and Drainage system of the project which, when finished, will help meet the water needs of Utah's growing population. In addition, the Act's environmental reforms help to protect Utah's abundant and diverse fish and wildlife resources. By establishing an ongoing program for environmental protection, future fish and wildlife needs will be recognized and past damage to habitat will be corrected. Further, this legislation provides for cost-sharing of construction costs by requiring that thirty-five percent of the project's reimbursable costs be paid by non-Federal sources. The Governor, the state of Utah and the District are committed to meeting their responsibilities of the cost-sharing provisions of the Act. This precedent-setting legislation is a testament to the vision and dedication of our Utah delegation and the Congress generally.

The overall budget for the Central Utah Project in fiscal year 1994 is $25.77 million. This amount will be matched with $12.6 million in local funds. Included in the budget request is $3.7 million for studies associated with the completion of the Irrigation and Drainage System. $2.5 million is included for the Wasatch County Water Efficiency Project which will make water management improvements in the areas of municipal, irrigation, water treatment and wastewater disposal. In addition, $2 million will be included for water management improvements. Also included is funding for two studies—$2.0 million for the Provo River studies and $2.2 million for studies associated with the Uinta Basin Replacement Projects. The highest funding levels are in the areas of fish and wildlife management. We are requesting $4.6 million for various fish and wildlife projects and $5 million for the Federal contribution to the Utah Reclamation Mitigation Account.

In conclusion, Mr. Chairman, the Central Utah Water Conservancy District is looking to the future enthusiastically. Enactment of the Central Utah Completion Act will allow the citizens of Utah to meet their future water needs while protecting the natural beauty of our state. We could not have achieved this without the ongoing support of the Utah congressional Delegation and the Members of this Committee. We look forward to continuing our work with you in the future. Thank you again for the opportunity to testify.

SOUTH DAKOTA RURAL WATER PROJECTS

STATEMENT OF HON. LARRY PRESSLER, U.S. SENATOR FROM SOUTH DAKOTA

Senator DECONCINI. Senator Pressler is here and we are going to take him out of order because he has other things on his schedule.

Senator, we welcome you and we know that you will continue to push for your projects. We welcome your statement at this time.

Senator PRESSLER. Thank you, Mr. Chairman. I shall be fairly brief. I do ask that my entire statement be made part of the record. I will just tell you the story. You are going to hear testimony later from several South Dakotans. I have the list of projects our State legislature, Senator Daschle, Congressman Johnson, and I have agreed upon for the Bureau of Reclamation and Corps of Engineers projects in South Dakota.

I want to thank you, Mr. Chairman, for this opportunity to testify on the Energy and Water appropriations for fiscal year 1994. I wish to talk about three areas vital to South Dakota—economic development, job creation, and public health. An important factor in all these areas is an item that most people take for granted—water.

Mr. Chairman, in our State, drinking water for human beings has become a big issue. Not to be too showy here, but one of my constituents brought this water to D.C. with him. His name is Duane Aymar. He lives northwest of Miller, SD, in Hand County, and this is water that is directly out of a well that is 1150 feet deep, which is a deep well in our State. It is an expensive well to drill.

Around Humboldt where I live, wells are usually only about 350 feet deep. Duane tells me that he has to pump the well 24 hours a day since the sand flow is so bad. He tells about the efforts he has made to get clean water. A new well would cost Duane about $16,000 and still would be about this same quality of water. Drinking water for human beings is a major issue and I think that the color of this water and the quality of it, when checked by the State inspection system, would show it is not potable for humans.

I point that out because safe drinking water has become a health issue for human beings and for livestock in South Dakota. Public health is also a big issue here in Washington. I might report to you, Mr. Chairman, that South Dakota's legislature has just approved the State funding portion of the projects for which I am seeking Federal funding. I know what great restraints the committee is under in funding water projects.

MID-DAKOTA AND MNI WICONI PROJECTS

The Mid-Dakota and the Mni Wiconi projects are both very important pipelines. Currently, only 1 community out of the 24 communities that will be served by the Mid-Dakota system meets Federal water quality standards. Of the 24 communities, 4 have water that should not be used as a drinking source, and seven communities have water that could have a detrimental side effect on the individuals using it. Mr. Chairman, only 3 communities of the 24 planned to be served by Mid-Dakota passed safety and health tests.

The Mni Wiconi project, when completed, will bring safe water to the poorest county in America. That system will also serve 3 other counties that are among the 10 poorest in this Nation.

I shall put in the record my arguments on job creation and economic development, but my most important conclusion is that for all the water projects in South Dakota—and I would place at the center this flask of water which you can see—the quality of water is not potable. This water illustrates the need.

Mr. Chairman, I ask unanimous consent to place in the record the remainder of my statement and a statement from Duane Aymar who supplied this water. There are also some shower heads here which show you what happens to shower heads in a very short time. The shower head is less than 1 year old.

This is the problem we have. I want to work with you on solving it.

I thank you very much for listening to me. Later today, some very articulate people from my State will be here. I speak on behalf of our congressional delegation this morning and our State legislature, and I thank you very much.

[The statements follow:]

Statement of Senator Pressler

Mr. Chairman, I thank you for this opportunity to testify on the Energy and Water Appropriations for fiscal year 1994.

I wish to talk about three areas vital to South Dakota—economic development, job creation and public health. An important factor in all these areas is an item that most people take for granted—water. Without clean and safe water, achievements in these areas will be limited or not be met at all. That is why I am here today.

My goal is to see that South Dakotans from border to border enjoy safe drinking water. Since first coming to Congress, I have fought continually for the development of South Dakota water projects. The funding I am speaking for today would be a major step in achieving that goal. This funding would bring clean and safe drinking water to more than 50,000 residents of South Dakota. These needs are immediate.

PUBLIC HEALTH

In this day and age of fiscal restraint, only projects with the greatest demonstrated need can be funded. Proposals offering major public health improvement benefits fall into that category.

Most people living in urban areas take for granted the availability of safe and clean drinking water. Very few check the quality of water before renting an apartment or moving into a home. However, that is not the case in South Dakota. Without clean and safe drinking water, the risk to public health is great. Imagine your three year old child waking up in the middle of the night with a flu or high fever and needing a glass of cold water. Would you serve your sick child water of questionable purity?

For Mid-Dakota, currently only one community out of the twenty-four communities that will be served by the system meets federal water quality standards. Four communities of the twenty-four have water that should not be used as a drinking source, and seven communities have water that could have detrimental side effects on the individuals using it. Mr. Chairman, only three communities of the twenty-four planned to be served by Mid-Dakota pass safety and health tests. The Mni Wiconi project, when completed, will bring safe water to the poorest county in America. That system also will serve three other counties that are among the ten poorest in this nation.

JOB CREATION

These projects could create nearly 1,000 jobs in South Dakota. This number is based on experience with past federal water projects. I would like to point out that these jobs would last for years. They are not short-term jobs. They would give a significant boost to rural South Dakota. These projects also will enhance South Dakota's overall economic development.

ECONOMIC DEVELOPMENT

Millions of dollars in additional state revenues would be generated when these projects are completed in South Dakota.

Nothing is more important to ranchers and farmers, and people living in towns and cities, than the availability of safe and clean water. It is equally important to

South Dakota's efforts to promote business development and the tourism industry. It is a key element for South Dakota's largest industry—agriculture.

Agriculture is the main source of income for many South Dakotans. Bringing them safe and clean water will improve farm income. Young livestock often die from water-induced scours which is brought on by inferior quality water. In addition, the overall health and marketability of livestock would be enhanced by clean water.

Most important, the Mni Wiconi Rural Water System and the Mid-Dakota Rural Water System will bring clean, safe drinking water to more than 50,000 residents of South Dakota. Mni Wiconi will provide safe water to some of the poorest communities in the United States. Shannon County on the Pine Ridge Reservation is the poorest county in the United States. This project can be the key that unlocks that county's door to economic development.

CONCLUSION

Water development is one of my highest priorities. The State of South Dakota also shares this priority. The State of South Dakota has dedicated revenues to meet its cost sharing obligations for these projects. If South Dakota is to grow and prosper, we must be able to utilize our most precious natural resource—water.

I am proud of the citizens of South Dakota who have come here to speak on this matter. Mr. Chairman, I support the request of South Dakota for funding of these projects in the Energy and Water Development Appropriations bill for 1994.

I thank the Committee for its past support of these needed water projects. The people of South Dakota would appreciate your continuing support.

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES—ENERGY AND WATER DEVELOPMENT APPROPRIATIONS BILL FOR 1994—SUMMARY

	FFY 1993 conference allowance	FFY 1994 South Dakota's request
Bureau of Reclamation:		
General investigations:		
Black Hills water management study	$100,000	$150,000
Lewis & Clark RWS	100,000	100,000
Technical assistance to States	25,000	35,000
Construction:		
Belle Fourche	6,352,000	7,000,000
Mid-Dakota RWS		7,991,000
Mni Wiconi	5,000,000	13,500,000
Lake Andes-Wagner/Marty II		2,100,000
South Dakota biodiversity trust		1,500,000
Oahe Unit	174,000	175,000
Corps of Engineers:		
Studies:		
Aberdeen and Vicinity	19,000	
Vermillion River basin	117,000	20,000
Pennington County		50,000
Wildlife restoration:		
Lake Sharpe	45,000	400,000
Lake Oahe	120,000	600,000
Planning assistance to States (sec. 22)		30,000
Preconstruction:		
Big Sioux River, Sioux Falls	400,000	400,000
Watertown and vicinity	175,000	200,000
Aberdeen and vicinity		150,000

NOTE.—FFY 1994 proposed budget figures to be released April 5, 1993.

STATEMENT OF DUANE AYMAR

My name is Duane Aymar. I live northwest of Miller, SD.

Yes, this is an Honest to God water sample direct from the water hydrant. This well was drilled in 1953 by my father. The depth of the well is 1150 feet. We have to pump the well 24 hours a day as the sand flow is so bad. In our house we have a settling tank to catch the sand, a pressure system, then through a water softener, next a distillation unit so we can drink the water. The man who drilled this well for my father drilled a number of wells in this area from 1948–56 all are in about the same shape.

Also when drilled the well had 35psi of pressure and flowed over one-quarter mile in ¾ pipe. Today the water rises to the surface and flows down the casing, no pressure. This is in the Dakota flow artesian basin. A new well would cost about $16,000 and would still be about the same quality of water. We repair the pump or replace it with a new one about two times a year. Also I actually shovel sand out of the livestock water tanks once in a while.

Our last water heater lasted 5 years and 8 months. We had the heating elements changed two times in that period and replaced it in February of this year.

I do not know where to start to put a dollar figure on our cost of this well, but I do know it is a severe strain on our budget

We need your help soon, Please!

Senator DECONCINI. Thank you, Senator Pressler. We will certainly give it every consideration here.

Senator PRESSLER. Thank you, very much.

CENTRAL ARIZONA PROJECT

STATEMENT OF HON. JOHN MC CAIN, U.S. SENATOR FROM ARIZONA

Senator DECONCINI. The next witnesses will be on behalf of the Central Arizona Project. I welcome my colleague, Senator McCain, along with Governor Symington, and Rita Pearson, the director of the Arizona Department of Water Resources, and former Governor Sam Goddard, the chairman of the Central Arizona Water Conservation District will be accompanying you as well.

Senator McCain, you certainly have been a strong advocate, both in the House and here, of this project as we have worked together over the years. You may proceed.

Senator MCCAIN. Thank you very much, Mr. Chairman. Thank you for taking the time from your very busy schedule to be here for this hearing. I want to thank you for the opportunity to introduce Governor Symington to the committee. We are accompanied this morning by a group of distinguished Arizonans who are united in their commitment and dedication to the completion of the Central Arizona Project.

Each year for more than 20 years, Governors of Arizona have led similar groups on a pilgrimage to Washington to request that Congress support funding for construction of the project. Each year, for more than 20 years, you and your predecessors and our House counterparts have responded favorably to these requests. As a result, the CAP system is nearing completion and repayment of the Federal investment in the project is due to begin next January. The CAP remains absolutely essential to solving Arizona's ground water overdraft problems and to providing a supplemental source of water crucial to the future growth and development of our State.

We Arizonans are extremely grateful to this committee for its years of consistent support for the CAP as well as for vital dam safety work and a host of other water-related projects. Together, these projects constitute a major investment in Arizona's infrastructure that will begin to pay dividends to the State and the Nation well into the 21st century.

To testify about works in progress and about work yet needing to be done, I am honored to present to you the Governor of Arizona, Hon. Fife Symington. Thank you, Mr. Chairman.

Senator DECONCINI. Thank you.

Governor, before we proceed I want to welcome you here. You have testified here before. I think this is your third time on behalf of Arizona. You carry our State's problems very well under considerable pressure. I would also like the record to show that after the testimony here we will hear from another Arizonan, Harry Cruye, chairman of the Gila River Farms, who will also be testifying before the committee this morning.

IMPACT OF RECENT FLOODING

This year has already been an eventful one in Arizona, as far as water issues are concerned. We have experienced record flooding since the beginning of January and the State is under a national disaster declaration. A great deal of water remains in the system so the extent of the flood damage cannot yet be calculated.

To date, however, extensive agricultural property damage has occurred. I would like to take this opportunity to commend you, Governor, for leading the State through this crisis. I would also like to commend the Army Corps of Engineers and the Bureau of Reclamation for their tireless efforts in controlling the flood waters. Their involvement kept the damage from being even more extensive. As a result of this flooding, it has become even more critical to examine methods to prevent future flood disasters.

Several vital flood control projects are already underway, thanks to the attention of Chairman Johnston and this committee. Additionally, once the water recedes, it will be important to evaluate what flood control projects are needed to prevent similar devastation in the event of future flooding.

CENTRAL ARIZONA PROJECT

In Arizona, we are also at a crossroads, Governor, as you know so well, in the management of our water resources. The Central Arizona Project, which is the product of a lot of hard work and commitment by many people in this room, is nearing completion. The Bureau delayed declaring the CAP substantially complete last year, but it has stated that it will make the declaration at the end of this year with the repayment beginning in January 1994.

However, several concerns remain regarding the CAP. Funding is necessary in fiscal year 1994 for a variety of activities, including retrofitting the scrubbers at the Navajo generating station, continuing repair work on the damaged siphons, completing the Tucson Aqueduct, finishing construction on CAP dams, and for the construction of Indian water distribution systems.

Arizona also has some serious water quality and dam safety concerns that must be met, especially in light of the recent flooding. I intend to work with Chairman Johnston and the ranking member, Senator Hatfield, to see that these and Arizona's other needs are addressed as we proceed with consideration of the bill for fiscal year 1994.

Again, thank you, Governor, for your leadership, and we welcome your testimony.

I see my friend and former colleague Congressman Rudd is here. If you would like to join us, Congressman, come up here and make yourself at home. He was instrumental in moving the CAP forward when he served on our counterpart subcommittee in the House. We worked for 10 years together on this project. We welcome you, Congressman Rudd. Do you care to make any opening statement before our Governor?

Mr. RUDD. I cannot speak for the Governor and I think he can do a good job. But thank you, Senator.

Senator DECONCINI. Governor Symington.

STATEMENT OF HON. FIFE SYMINGTON, GOVERNOR OF ARIZONA

Governor SYMINGTON. Thank you, Mr. Chairman. On behalf of my fellow Arizonans, I would like to thank you for your leadership in this very important area and we are very grateful for the time and the effort that you have provided in being a wise steward of Arizona's water issues.

I would also like to acknowledge Congressman Rudd, who knows this issue very well. It is also a pleasure to be sitting at the table with former Governor Sam Goddard, a very distinguished Arizonan who is chairman of the CAWCD, and on my left I have with me Rita Pearson, who is the new head of the Arizona Department of Water Resources.

I would also like to publicly acknowledge the tremendous bipartisan support that we continue to get from the Arizona delegation with regard to water issues that are vital to the future of our State. That type of unity, both past and present, has been critical in achieving the very important objectives that we are all pursuing in terms of our water lifeline and future economic development as a State.

PREPARED STATEMENTS

I appreciate the opportunity to appear before you again to discuss appropriations for water and energy projects which affect the State of Arizona and my comments to you today will be brief. I have detailed testimony and ask that I may submit it to you for later consideration.

Senator DECONCINI. Without objection, it will appear in the record, Governor.

Governor SYMINGTON. Mr. Chairman, I also have President John Lassen of the SRP's testimony on the CAP that I would like to submit for the record.

Senator DECONCINI. Likewise.

Governor SYMINGTON. As well as Marybeth Carlile, executive director of SAWARA, has testimony that she would like me to submit on her behalf.

Senator DECONCINI. That will all appear in the record.

[The statements follow:]

STATEMENT OF GOV. FIFE SYMINGTON OF ARIZONA

This testimony, submitted on behalf of the people of the State of Arizona, asks for continued support of funding for the various water-related projects which affect the State. Projects include: the Central Arizona Project, including safety of dam features and distribution systems; the Colorado River salinity control program; groundwater recharge programs; and various other Bureau of Reclamation and Corps of Engineers projects. This testimony supports the levels of funding proposed by the President for the projects and programs under consideration by this subcommittee, and asks for additional funding for the Bureau of Reclamation and Corps of Engineers for work that has become necessary as a result of recent floods.

The past year's experiences and events have raised a number of issues, problems and concerns that affect projects and programs in Arizona which are funded by the United States through appropriations made by this Committee. Construction of the Central Arizona Project is drawing to a close. Repayment of the Project is scheduled to begin, but we find that the financial structure for repayment is based on an inadequate formula when costs, ability to pay, water demand, and Indian water needs are blended into the equation. In addition to the Central Arizona Project issues, we have experienced extreme rainfall and water runoff conditions which have strained the capacity of the State's flood control and conservation facilities. This testimony will address these matters, report on activities to resolve the issues, and request your support in our efforts.

CENTRAL ARIZONA PROJECT

The importance of the Central Arizona Project to the future of the State of Arizona cannot be overstated. When complete, the Project will provide the facilities necessary for Arizona to divert and put to use its remaining entitlement to Colorado River water. Central Arizona water demand, particularly in the metropolitan areas of Phoenix and Tucson, continues to grow. Colorado River water is necessary to provide a long-term, reliable supply of water for the municipal and industrial users in these communities.

Use of Colorado River water continues to be an integral part of the state's water management program. The combination of this new supply of surface water with ongoing state efforts for groundwater conservation and recharge, and effluent reuse, will allow the state to achieve its goal of balancing groundwater uses with renewable supplies by the year 2025.

In addition to the need for Central Arizona Project water for municipal and industrial uses, the supply is essential to satisfy the rightful claims of the Indian communities in the Project's service area. Indian water right settlements, which have been successfully negotiated, have relied on Central Arizona Project water as a foundation for the agreements. With this new supply available to the Indian communities, they can begin much needed economic development on the reservations.

A milestone was achieved in 1992 when Colorado River water was delivered to the City of Tucson. The city placed its $100 million water treatment plant and related facilities into operation, and plans to treat and deliver about 50,000 acre-feet in 1993. The Tucson metropolitan area previously relied exclusively on groundwater. With this new supply, pumping from the overdrafted aquifers beneath the city will be reduced dramatically.

Deliveries of Central Arizona Project water in 1992 were again less than expected. This is a disappointment that is attributable to several causes. There continues to be an abundance of locally available water supplies which reduced the demand for imported water in all water using sectors. However, the largest drop in demand for CAP water was seen among irrigation users who did not fulfill long-held utilization expectations.

Agricultural irrigation users in Arizona are currently experiencing difficult times due to a combination of circumstances. Infestation of insects such as the White Fly, low prices paid for cotton crops, low yields due to weather and the high cost of energy and water have caused a substantial reduction in the irrigated acreage in the state. The outlook for improvement in many of these conditions is not good. This situation, unfortunately, arises at the time that Central Arizona Project water supplies are first becoming available. As a result, the long-held expectation that agriculture would use all water supplies that were unused by municipal and industrial and Indian users has not occurred.

A number of activities have been undertaken during the past year to resolve the matter of underutilization of Central Arizona Project water and to insure the financial viability of the Project. It is in the state's best interest to resolve these problems to preserve supplies necessary for the future, to offset groundwater uses for improved water management and for economic stability and development.

Arizona appreciates the fact that consistent levels of Congressional appropriations have allowed the Bureau of Reclamation to maintain the construction schedule of the Central Arizona Project. These appropriations have fulfilled the commitment made by the United States in 1986 when a comprehensive cost sharing agreement was executed among several entities in Arizona and the Department of the Interior.

The fiscal year 1994 construction of Central Arizona Project facilities is focused in six primary areas: completion of the Tucson Aqueduct, enlargement of existing Roosevelt Dam, completion of New Waddell Dam, repairs to damaged siphons at the Hayden-Rhodes Aqueduct, repair to the Reach 11 Dikes, and construction of India distribution systems.

The backbone of the Central Arizona Project is the Tucson Aqueduct, which is now operable to its terminus at the south boundary of the San Xavier India Reservation. One remaining important feature of the Tucson Aqueduct is a facility to provide system reliability at the terminus of the Project. The Bureau of Reclamation is currently evaluating alternatives which would provide required reliability of CAP water supplies. The current schedule calls for the completion of a Environmental Impact Statement and the preliminary system design to be completed in 1994. In addition, a terminal storage reservoir to be constructed in cooperation with the City of Tucson is receiving serious consideration.

New Waddell Dam on the Agua Fria River will provide a critical regulatory storage and power management component for the Project. Construction of New Waddell Dam was functionally complete in 1992. Topping-out ceremonies were held October 29, 1992. Some appertinent works are being completed in 1993. Filing of the reservoir has begun and has been enhanced by the large amount of runoff from the Agua Fria River this winter. On March 15, 1993, there was already 450,000 acre-feet of water in storage. This is nearly 300,000 acre feet above the 157,000 acre-feet that would have been captured by the historic Waddell Dam. Flooding in the Phoenix Metropolitan and Yuma areas in the first quarter of this year would have been even worse without this facility.

The last major feature of the Central Arizona Project will be a enlarged Roosevelt Dam on the Salt River. When completed, Roosevelt Reservoir will provide greater water conservation, increased flood control, recreation benefits, and elimination of safety of dams deficiencies at the existing dam. Funds for construction of an enlarged Roosevelt Dam are authorized by the Colorado River Basin Project Act and the 1985 Amendments to the Safety of Dams Act. Local funding is provided pursuant to the Plan 6 Cost Sharing Agreement. The current schedule calls for completion of construction in 1995, however, it appears this will be extended by 6 to 12 months because of this winter's floods. It is unfortunate that this feature of the Project was not completed this year to capture additional water and provide much needed flood control for Maricopa County. Nevertheless, opportunities will again arise and the new enlarged dam needs to be completed as soon as possible to prevent future flooding.

The budget for Central Arizona Project includes funds for work on the Hayden-Rhodes Aqueduct which, for the most part, will be for the repair or replacement of six siphons. These siphons are large buried pipes which permit the Aqueduct to cross below rivers and large washes. These repairs are essential to prevent failure and interruption of delivery for an extended period. Loss of water delivery capability would result in major disruption with significant economic consequences because many users are now relying on Project water as a major source of their water supply.

The budget for the Central Arizona Project also includes funds for the installation of air scrubbers at the Navajo Generating Station in northern Arizona. Approximately 24 percent of the power plant is dedicated to the Central Arizona Project for the purpose of providing power to pumps on the CAP. Modifications to the power plant were agreed to by the Department of the Interior, Environmental Protection Agency, Salt River Project and the Grand Canyon Trust.

Continued construction of distribution facilities for the Indian reservations is a component of the Central Arizona Project that must also be emphasized. Appropriations for distribution systems are essential to show the federal commitment. In fiscal year 1994, funds are needed to complete work on the irrigation distribution system for the Salt River Pima-Maricopa Indian Community, to continue the design and construction of systems for the Tohono O'odham Nation and continued planning and studies for the Gila River Indian Community.

SAFETY OF DAMS

Construction activities by the Bureau of Reclamation to assure that dams under the jurisdiction of the Department of the Interior meet safety standards is of great importance to the residents of the State of Arizona. Dams on the Salt and Verde Rivers with safety deficiencies are located upstream of the Phoenix metropolitan area with its 2 million residents. The comprehensive Plan 6 Cost Sharing Agreement executed in 1986 provides that the Salt River Project will pay for a portion of these necessary repairs.

In fiscal year 1994, safety of dams construction work is scheduled for Stewart Mountain Dam on the Salt River and Bartlett and Horseshoe Dams on the Verde River. Additionally, approximately $18 million of the work scheduled for enlargement of Roosevelt Dam is for safety of dams purposes. These funds are in addition to those needed for Central Arizona Project purposes. It is essential that needed safety of dams funds be appropriated to assure that construction is completed on time and the concern over the integrity of these structures can be eliminated. Added to the amounts appropriated by the federal government will be non-federal funds provided pursuant to the Plan 6 Cost Sharing Agreement.

OTHER BUREAU OF RECLAMATION PROJECTS

In addition to the safety of dams work associated with dams on the Salt and Verde Rivers, the Bureau of Reclamation is also modifying Coolidge Dam on the Gila River. This dam, which is owned and operated by the Bureau of Indian Affairs, has been identified as a top priority among those in the United States needing repairs to ensure the safety of the people and property below the dam. This winter the reservoir exceeded the maximum capacity allowed under current operating criteria. Water flowed over the spillway in amounts far in excess of quantities experienced historically. This has caused added concern to residents in the flood ravaged communities downstream. Necessary repairs should not be delayed. A total of $7.8 million is needed in fiscal year 1994.

Also at Coolidge Dam, there is a need for additional repairs on the spillways to enhance water conservation opportunities. The spillway gates are inoperable because of inadequate maintenance. This creates a situation whereby additional conservation storage above the spillway crest is not available. After the necessary safety repairs are made to the dams' abutments, it would be desirable to utilize the storage space which could be available by proper operation of the spillway gates. This will provide flexibility for water supply and flood control operations. In the past 10 years water has passed over the spillways on two occasions. In both cases additional water could have been saved. Although the Bureau of Reclamation has received funding for work to assure that the dam is safe, no money has been made available to do the needed work on the spillway gates.

Plans and preliminary design for spillway gate repairs have been completed. The Bureau of Indian Affairs has chosen not to include this work in its budget. This is a feasible and important project. The total cost is $7.73 million. Work could begin in fiscal year 1994. An appropriation of $1,180,000 would be appropriate to initiate the work. The principal beneficiary is the San Carlos Project. The reason work is necessary is because of inadequate maintenance by the United States. It is, therefore, appropriate that the U.S. Government assume responsibility for the repairs to allow this important facility to operate as designed. We are asking that Congress add $1,180,000 to the Bureau of Reclamation's budget for fiscal year 1994 to initiate this work.

Resolution of Indian water right claims is an important element of Arizona's water management program. For the most part, settlement negotiations have been successful in the state. To a great extent, this success story is possible because of the Central Arizona Project and the water supplies it is bringing to the central part of the state. The process is not complete, however. Resolution has not been achieved for all reservations. Also, all parties must continue to fulfill their commitments agreed to in successful settlements. These commitments include both state and federal appropriations to community development funds and completion of Project facilities. In fiscal year 1994, $4.2 million is needed for distribution systems and farm rehabilitation on Tohono O'odham reservations. Additionally funds are needed to assure that loans are made to the Fort McDowell Indian Community under Small Reclamation Loan Authority.

The Colorado River constitutes the largest source of long-term renewable water supplies to the State of Arizona. When the Central Arizona Project becomes fully operational, use of Colorado River water in Arizona will represent over 60 percent of the state's average long-term renewable water supply. Therefore, Arizona is very concerned about the future water quality of this essential supply and supports the Bureau of Reclamation's ongoing Colorado River Water Quality Improvement Program authorized under Title II of the Colorado River Basin Salinity Control Act. A total of $31.5 million is needed for construction of facilities by the Bureau of Reclamation for this important program. Additionally, $1.5 million is needed for plan formulations. These amounts will be adequate to move the program ahead at a sufficient pace to assure that the quality on the river meets the criteria agreed to by the seven Colorado River Basin states and approved by the Environmental Protection Agency. For more details on individual projects, I refer you to a detailed statement which has been provided to your committee by Jack A. Barnett, Executive Director of the Colorado River Basin Salinity Control Forum.

The Bureau of Reclamation has several other smaller but no less important projects in Arizona. Included are the High Plains States Groundwater Demonstration Project on Rillito Creek in Tucson, the Tucson/Phoenix Water Reuse Study which will be initiated this year, and the continuing efforts within the Bureau of Reclamation Water Management and Conservation Program. Full funding for these important projects is requested.

CORPS OF ENGINEERS PROJECTS

Arizona has experienced extensive damage from flooding along the Gila River system this winter. Damage has occurred from the upper most reaches of the watershed at Duncan and Clifton to the river system's mouth at Yuma. Extensive flooding occurred along the Gila River near Winkelman and flooding continues in the Wellton-Mohawk area and behind Painted Rock Reservoir. Painted Rock Dam and Reservoir substantially reduced potential flooding along the Gila River and the Corps of Engineers is to be commended for its operation. Peak inflows were in the range of 133,000 cfs while the maximum flow downstream was 26,000 cfs. However, there is a question of whether there could be improvements in the system's operation or in the structure itself to handle future events. The Corps has authority to undertake evaluations of the system under the Gila River and Tributaries Planning or Continuing Authorities Program. We are asking that funds be appropriated for the purpose of evaluating the recent flooding event and determining if additional project features should be constructed. Unfortunately, we are still assessing damages and the flooding is continuing. Plans for recovery are underway. We will work with Congress and the Corps of Engineers to define a specific dollar amount which we believe appropriate for such studies. We can't ignore this past flood. If a reoccurrence can be avoided through some form of action, assuming financial and environmental feasibility, the appropriate steps should be initiated now.

We are asking that the budget include funds for construction of the Clifton Flood Control and the Holbrook Dike and Levee Projects. The Holbrook Dike and Levee project is considered a priority based on the severe impact flooding has bad on the economic growth of the Holbrook area. The Clifton Flood Control Project is the result of an extensive team effort including representatives of the Corps of Engineers and state and community leaders. This effort has been in progress since the last major flood occurred in Clifton in 1983. That flood was the eleventh flood to damage Clifton in the past 75 years. The State of Arizona is committed to this project and to providing the local sponsor's share of the project costs.

It is critical that the United States continue full funding of the feasibility study of the Lower Santa Cruz River. Extensive damage occurred this winter from the Santa Cruz River flowing uncontrolled over agricultural lands in Pinal County. An answer must be found to alleviate this flooding problem. Arizona also supports the continued funding in the amount of $4.2 million for the construction of the Corps of Engineers authorized Rillito River bank stability project and that $200,000 be added to initiate construction of a flood-control channel in Nogales.

We are asking that funds he appropriated to continue the feasibility studies for the Hassayampa River at Wickenburg, and the Tucson drainage studies. Also needed are appropriations for the McDowell Mountains study and the Tres Rios study at the confluence of the Gila, Agua Fria, and Salt Rivers. The McDowell Mountains study is a reconnaissance flood control study in a rapidly growing northeast Phoenix metropolitan area. The Tres Rios project will include improvement of water quality and recreation in addition to flood control. The Corps continues to work with the Arizona Department of Water Resources for the development of a continuous hydrologic flow computer model for several Arizona rivers. All of these studies are important to Arizona and we urge your support.

This testimony was developed by various interests in the state, including the Central Arizona Water Conservation District. In summary, the state and others urge your continued support of funding for water related projects in Arizona.

STATEMENT OF JOHN LASSEN, PRESIDENT, SALT RIVER PROJECT

Mr. Chairman, my name is John Lassen, and I am the President of the Salt River Project, the nation's oldest multi-purpose reclamation project. I appreciate the opportunity to submit this testimony to the Senate Subcommittee on Energy and Water Development.

The Salt River Project is comprised of the Salt River Project Agricultural Improvement and Power District and the Salt River Valley Water Users Association. Together, the Association (a private water delivery organization) and the District (a political subdivision of the State of Arizona) provide water and power to over a half million customers in the Phoenix metropolitan area.

As an agent of the Federal government, the Salt River Project operates six dams on the Salt and Verde Rivers northeast of Phoenix. These structures impound the runoff from a 13,000 square mile watershed to provide surface water supplies for agricultural, residential, recreational, municipal and industrial uses in central Arizona. In order to assure the continued safe and efficient operation of the dam system, it is critical that the Congress continue to fund the Safety of Dams work currently in progress along the Salt and Verde River systems. It is important that funding be sufficient to permit adherence to project construction schedules. In addition to depressing total program costs, conformance with the work schedules is necessary to facilitate safe management of the water resource. Project schedules are carefully designed to account for water release requirements and to maintain the integrity of the water delivery system.

Cost-shared Federal funding is required in fiscal year 1994 for Safety of Dams construction work at Bartlett Dam, Horseshoe Dam, and Roosevelt Dam. I am pleased to inform the subcommittee that Safety of Dams modifications at Stewart Mountain Dam were dedicated last April. The project provides a model for Federal and local authorities working together to improve the environment, sustain the economy, protect people and property and enhance the quality of life.

I would also note that construction continues at Roosevelt Dam despite recent heavy flooding in Arizona. As a consequence of dam modifications, Roosevelt will be elevated seventy-seven feet and its conservation storage capacity will be increased by 20 percent. Roosevelt Dam is the cornerstone of SRP's water management operations, and an expansion of the dam's storage capacity will enable SRP and participant cities to better meet water demands of the growing Phoenix metropolitan area. In addition, the increased reservoir capacity and improved operational features will provide greater latitude to meet delivery obligations in times of above-or below-average rainfall.

The recent floods in Arizona emphatically demonstrate the importance of additional flood control capacity at Roosevelt dam. Ongoing modifications to the dam will add 1.8 million acre-feet of combined flood control and safety of dam storage capacity. This new benefit will enable dam operators to protect downstream dams and heavily populated urban areas from future flood events on the Salt River.

Design revisions and a compressed construction schedule at Horseshoe Dam could result in savings of up to $7 million for the Federal government. In order to realize those savings, it is necessary that sufficient funds be appropriated to keep the dam modification project on schedule through fiscal year 1994.

Salt River Project also supports appropriations to fund the Bureau of Reclamation's pro rata participation in the installation of scrubbers at the Navajo Generating Station in northern Arizona. In 1991, the Department of Interior, the Environmental Protection Agency, the Grand Canyon Trust, and the Salt River Project reached an historic agreement on plant design modifications intended to promote increased visibility at Grand Canyon National Park. The Bureau owns a 24 percent share of the plant, which is operated by the Salt River Project.

Mr. Chairman, Salt River Project applauds this subcommittee for its historical support of the Central Arizona Project, and we recommend the appropriation of such funds as are necessary for its completion. As the subcommittee is aware, the perilous financial situation of certain irrigation districts in Arizona may create prospective repayment difficulties for holders of CAP water contracts. The Governor of Arizona has established a Central Arizona Project Task Force to study problems associated with the CAP and to develop recommendations for their solution. SRP fully supports the CAP Task Force process and is actively participating in the development of responsible and cost-effective solutions.

Mr. Chairman, the Salt River Project recognizes the great importance of achieving final settlements of all Arizona Indian water rights claims in an expeditious and equitable manner. This is a prerequisite to effective water planning in our state. In this connection, SRP supports Federal appropriations to satisfy successfully negotiated water rights settlements. SRP supports the request of the Fort McDowell Indian Community for full funding of a Small Reclamation Project Act (43 U.S.C. Sec. 422(a) loan to the Community as authorized by Section 408(e) of the Fort McDowell Indian Community Water Rights Settlement Act of 1990 (Public Law 101–628). We urge that these funds not be subject to reprogramming. Partial funding for this loan was included in the fiscal year 1993 Energy and Water Development Appropriations

Bill. We also support Federal appropriations in satisfaction of obligations created under the San Carlos Apache Indian Water Rights Settlement Act.

Turning to energy programs within the subcommittee's jurisdiction, SRP is pleased to lend its continued support to the Solar Two project of the U.S. Department of Energy. The project, which is cost-shared by DOE with several utilities and manufacturers, represents the critical last step in transferring molten salt solar thermal technology from a national laboratory to the private sector. The 10 megawatt demonstration plant is designed to use components that can be scaled to 100 megawatts for the first commercial power plants to use this innovative technology. Upon its commercialization, the technology will create job opportunities for skilled workers and provide an economical source of energy with little adverse impact on the environment.

Salt River Project also supports the efforts of the Department of Energy to commercialize photovoltaic technology. With the support and encouragement of the Department, SRP has joined with over sixty other utilities nationwide to form the Utility Photovoltaic Group. We believe that, with the Department's support, utilities and photovoltaic manufacturers can build an industry that will ultimately provide a source of high-technology exports, as well as the promise of a clean and secure energy future.

In addition, Salt River Project supports full funding of the Federal Electric and Magnetic Fields research program as authorized by the National Energy Policy Act of 1992. We emphasize that the program's funding authorization was intended to supplement baseline funding of current EMF research at the Department of Energy. This intent has been communicated to the Department of Energy by the chairmen of the House Committee on Science, Space and Technology, the House Subcommittee on Energy and Power, and the House Subcommittee on Health and the Environment.

Mr. Chairman, Section 212 of the National Energy Policy Act of 1992 authorizes directed payments by the Department of Energy of 1.5 cents per kilowatt hour for qualifying renewable energy projects; such projects include solar, wind, geothermal and biomass energy systems. SRP supports the appropriation of funds pursuant to this authorization in order to promote the commercial viability of these clean and renewable sources of energy. Further, appropriations are necessary to make the development of such projects competitive for municipal utilities vis-a-vis investor-owned utilities; investor-owned utilities currently enjoy tax credit benefits for the production of energy from renewable resources.

Finally, Mr. Chairman, I would like to draw the subcommittee's attention to the important new responsibilities imposed upon the Federal Energy Regulatory Commission as a result of the enactment of the National Energy Policy Act of 1992. In particular, the Commission will require additional staff resources to fulfill its responsibilities under the law's transmission access provisions. Salt River Project has been working to promote the formation of voluntary regional transmission groups as an alternative mechanism for the cost-effective management of transmission access requests. We have, for example, committed substantial resources to help form the Southwestern Regional Transmission Association, the development of which was formally announced earlier this month. We recognize that the successful operation of regional transmission groups could relieve budgetary pressures on the Commission. Accordingly, we urge the subcommittee to encourage the Commission to expeditiously consider the conditions under which regional transmission groups might work in partnership with FERC to promote competition in the wholesale power generation markets.

Mr. Chairman, Salt River Project appreciates the opportunity to submit this testimony and wishes to acknowledge the subcommittee's long-standing support for the sound energy and water resource management in Arizona.

Thank you.

STATEMENT OF THE SOUTHERN ARIZONA WATER RESOURCES ASSOCIATION

The Southern Arizona Water Resources Association would like to add a voice of appreciation for your Committee's past support toward the completion of the Central Arizona Project. The Project is substantially complete and Tucson is receiving and using Project water.

This major renewable water supply will now serve all major cities in central Arizona. It has been long and costly in coming, and we are particularly gratified at the steady progress due to your kind vigilance because Tucson is at the "end of the pipe."

Tucson is very conscientious about water conservation and management. We have achieved the lowest per capita use of all major cities in the southwest. Central Arizona Project water will allow Tucson to stop overdrafting its groundwater supply and confidently plan for the future.

The issue of particular concern to our community is the planning and construction of terminal storage to ensure reliability of delivery when the aqueduct is down for repairs and emergency. Some funding is needed this fiscal year toward completion of the Environmental Impact Statement and preliminary design.

SAWARA strongly favors approval of the amount included in the President's budget for Central Arizona Project funding this fiscal year. The amount continues to be less each year as the completion of the entire Project is in sight. However, each year's appropriation is critical to that moment when it is finally finished and provides us with a reliable, renewable supply.

The time is near when repayment of the federal debt for this Project begins. Arizona is poised and ready to fully accept that responsibility. In spite of the changes in agriculture's ability to pay or use water, other beneficiaries will pick up the responsibility at no further federal expense.

As we build, use and pay back this water lifeline so critical to Arizona's future, your continued support is essential and appreciated.

CENTRAL ARIZONA PROJECT

Governor SYMINGTON. Thank you, Mr. Chairman.

Appropriations under consideration by this committee are of vital importance to the State of Arizona. Construction of water supply and flood control facilities is essential to support the economic development now occurring in the Southwest. I am extremely pleased with the progress the Bureau of Reclamation has made in constructing the Central Arizona Project facilities. The project is virtually complete. Almost a century of dreaming, planning, and constructing this large project is coming to a close.

A milestone was achieved in 1992 when the Colorado River water was delivered to the city of Tucson. This placed its $100 million water treatment plant and related facilities into operation and plans to treat and deliver about 30,000 acre-feet in 1993. Regulatory storage facilities are virtually complete at New Waddle Dam and we look forward to the completion and full operation of enlarged Roosevelt Dam by 1996.

WATER SUPPLY CONTRACT IMPACTS

The momentous occasion of project completion and the ability to use Colorado River water in central Arizona gives us assurance that we will have a secure water supply for the future. Deliveries of Central Arizona Project water in 1992 were again less than expected. This is a disappointment that is attributable to several causes. First, there continues to be an abundance of locally available water supplies, which I guess is a euphemism for floods, which reduces the demand for imported water in all water-using sectors. Second, the irrigation users did not fulfill long-held expectations for demand.

Agricultural users in Arizona are experiencing difficult times, a combination of circumstances are the cause, infestation of insects such as the white fly, low prices paid for cotton crops, low yield because of weather, and the high cost of energy and water, have caused a substantial reduction in the irrigated acreage in the State.

The outlook for improvement in many of these conditions is not good. However, efforts are underway to resolve the matter of underutilization of CAP water. A comprehensive evaluation of the issues surrounding the project is being undertaken by a CAP advisory committee which I recently appointed.

I am confident that this effort will result in the development of recommendations that will assure the project's future integrity. I firmly believe that if we are to advance economic development in the State of Arizona we must demonstrate that we are managing our water resources wisely and responsibly. The Central Arizona Project is an outstanding example of the foresight the State has demonstrated in implementing water management programs which assure that we are providing wise stewardship over the limited water resources available.

The testimony I am submitting to you today asks for your continued support of funding to make dam safety modifications on dams upstream from Phoenix on the Salt and Verde River systems and to make repairs to Coolidge Dam on the Gila River. It is essential that these modifications be completed to assure that these improvement structures are safe for our citizens. I am also asking for funds to repair the faulty spillway gates on Coolidge Dam. Completion of needed repairs will provide additional conservation space and some incidental flood control can be utilized. This was badly needed this past winter.

PLAN 6 COST-SHARING AGREEMENT

One of the principal reasons that the Central Arizona Project is on schedule is the plan 6 cost-sharing agreement negotiated between several entities in Arizona and the Department of the Interior. I am very pleased that all of the entities in Arizona, as well as the United States, have lived up to their commitments and have put forward sufficient funds to assure construction as rapidly as possible. The Bureau of Reclamation has a number of other projects in Arizona and although they are smaller than the CAP or safety of dams, they are no less important. We urge your support of all the bureau projects in Arizona.

FLOOD CONTROL NEEDS

Arizona has experienced extensive damage from flooding along the Gila River system this winter. Damage has occurred from the uppermost reaches of the watershed at Duncan and Clifton to the river system's mouth at Yuma. Extensive flooding occurred along the Gila River near Winkelman, and flooding continues in the Wellton-Mowhawk area and behind the Painted Rock Reservoir. Painted Rock Dam and Reservoir substantially reduce potential flooding along the Gila River and the Corps of Engineers is to be commended for its operation.

However, there is a question of whether there could be improvements in the system's operation or in the structure itself to handle future floods. We are asking that funds be appropriated for the purpose of evaluating the recent flooding event and determine if additional project features should be constructed.

Unfortunately, we are still assessing damages and the flooding is continuing. We will work with Congress and the Corps of Engineers to define a specific dollar amount which we believe appropriate for such studies.

CLIFTON, AZ, LOCAL PROTECTION PROJECT

The Corps of Engineers also has a number of other projects and programs in the State that we consider very important, including the Clifton, AZ, flood control project and the Holbrook dike and levee project. We, again, urge your support for all of these projects.

Mr. Chairman, the testimony I bring to you today is a joint effort of many interests in central Arizona—who support the Central Arizona Project, including the Central Arizona Water Conservation District.

I thank this committee for the opportunity to testify and also for your continuing support for water resources development in Arizona.

STATEMENT OF SAM GODDARD, FORMER GOVERNOR OF ARIZONA, AND CHAIRMAN, CENTRAL ARIZONA WATER CONSERVANCY DISTRICT

Senator DECONCINI. Governor, thank you. I am very pleased to be joined here my former Governor, Sam Goddard, who got CAPS through at a very critical time in 1964.

Governor Goddard, you carried the brunt of a lot of criticism about the CAP from the House of Representatives, as I recall at the time having worked for you. Now being chairman of the Central Arizona Water Conservation District, there is nobody in the State of Arizona who could have a better understanding of the history of this project and the need to finish it in a timely manner. I welcome any testimony you have, Governor.

Mr. GODDARD. Thank you, Senator DeConcini. I think it is well to remember the great efforts of Senator Hayden and Congressman Morris Udall and Congressman John Rhodes and the various Governors who have, since the beginning of the State, worked on this project. It must be remembered now that in the first quarter of this year we have had almost our total annual rainfall. And that does not denigrate the fact that the State is still very water scarce, in spite of our flood damage at this point.

PROJECT REPAYMENT

I would like to assure this committee that the CAWCD is well aware of its responsibility to pay back the Federal Government the entire cost of the project that we are responsible for. We, in spite of the publicity that has been forthcoming, are is in good order, good financial order, and we are able to accomplish our responsibilities, regardless of whatever may come out in some media.

Thank you.

Senator DECONCINI. Governor, thank you.

Ms. Pearson, do you have any comments that you would care to make?

Ms. PEARSON. No; thank you very much.

Senator DECONCINI. I do want to introduce Mr. Bob Lynch, who is the president of the Central Arizona Project Association, who is also with us.

And, Governor, I want to apologize for not being able to be at the CAP luncheon today due to the caucus meetings and other commitments. I apologize for being unable to attend.

I have some questions, Governor. Let me just ask one. I think you have already illustrated your understanding of the problems of the flood and have visited the affected areas a number of times. I will just pass over those questions.

INDIAN WATER RIGHTS ISSUES

I noticed in your testimony you mentioned that the CAP is essential to satisfy the rightful claims of the Indian communities in the project's service area. That is a quote. And that further, quote, Indian water rights settlements which have been successfully negotiated have relied on Central Arizona Project water as a foundation for the agreements. I could not agree more that that is factual.

However, as a result of your recent positions on Indian gaming in the State of Arizona and legislation passed by the Arizona House and Senate, several tribes have broken off negotiations on unresolved water rights settlements. They have said, at least in the press, that it is because of your position on the gaming issue.

In light of the gaming issue, can you update the committee on your efforts to restart the water rights negotiations with these tribes?

Governor SYMINGTON. Mr. Chairman, I have heard those same comments. But to my knowledge, today, the tribes are continuing to negotiate the water rights settlements.

Senator DECONCINI. That is very good to hear.

Governor SYMINGTON. I think initially there was a flurry of rhetoric and a very emotional reaction over the Indian gaming dispute. We have continued to maintain a posture of good will and are looking for a compromise. We certainly do not want this issue to involve other issues, important issues such as the water rights settlements.

Senator DECONCINI. Excuse me, Governor. Then you know of no cessation of negotiations on negotiations for Indian water rights settlements?

Governor SYMINGTON. At this time, I believe negotiations are continuing and are continuing in good faith.

Senator DECONCINI. Very good. Thank you. I have no further questions. Thank you very much, Governor, for your testimony. Thank you, Ms. Pearson, and thank you, Governor Goddard.

Governor SYMINGTON. Thank you, Mr. Chairman.

SACATON RANCH SOUTH, PHASE 2

STATEMENT OF MARY THOMAS, LIEUTENANT GOVERNOR, GILA RIVER INDIAN COMMUNITY

Senator DECONCINI. We will now listen briefly to Mary Thomas, lieutenant governor of the Gila River Indian Community, if she would please come forward.

Governor, we welcome you here. I regret that our time is somewhat limited, and I am going to include your full statement for the record.

Mr. Lewis, we welcome you and the lieutenant governor. Would you care to introduce anybody else here? Please feel free to do so.

Ms. THOMAS. Thank you, Senator. It is always a pleasure to see you. With me today to my left is Harry Cruyer, Jr., chairman of the Gila River Farm; general counsel Rod Lewis; Richard Thompson, a member of our Water Conservation Committee; Jonathan Thomas, member of our Water Conservation Committee; and Ardel Ruis, also a member of the farm board. And in the audience is our general counsel, Alfred Cox.

Senator DECONCINI. Welcome, Mr. Cox.

Ms. THOMAS. Senator, I just wanted to express my views on our interests on the CAP and also sharing some of that water. We have signed a contract, finally, in October 1992. We will be one of the largest users of the CAP water. We have signed for 171,000 acre-feet of water. We will be, probably, the largest greenbelt system in central Arizona.

And I want to reaffirm what Governor Symington just got through speaking about, the Coolidge Dam, which affects our reservation. We have lost millions and millions of dollars in land and also several lives, one police officer died in that mishap due to the flooding. So I do reinforce the statement on the Coolidge Dam fixup.

In sharing our CAP water allocation, it is our desire to move at an accelerated pace to use this water efficiently, not only for the benefit of the tribe, but for the whole State of Arizona. We have added our request to fiscal year 1994 appropriations and the figures are in here.

That will be my statement for now, except that it has always been our goal as a tribe in Arizona—self-determination. We want to take care of ourselves so that we will not be coming here in the future, to request additional help. But we do appreciate your interest. I know you have been there to visit us.

Now, we are all open for questions, if you have any.

Senator DECONCINI. Well, Governor, thank you. Indeed, I have an interest, and your leadership has helped to bring it to my attention here. I feel that we have certain commitments to satisfy your claims, and I am glad you have raised the Coolidge Dam repair problems, also. There is always a problem of priorities, but I can assure you that the Gila River Community will not be forgotten as we proceed with the consideration of your project.

I also want to thank you for the itemization that you lay out here so we can review this carefully and, hopefully, convince the committee and the staff here that we can fund most of these or many of these particular things. Some of them, I see, are not extremely expensive, but I can see that they are very important—monitoring gates, predesign and construction, and that sort of thing.

Ms. THOMAS. Yes; I believe there was also a question regarding Gila River water rights——

Senator DECONCINI. Yes.

Ms. THOMAS. We are working very intensively now with RWZD, and they are in the audience, also. We are trying to settle our differences, and it will be coming soon.

Senator DECONCINI. I have no further questions. Thank you very much, Governor, and thank you for your fine testimony.

[The statements follow:]

STATEMENT OF MARY V. THOMAS

Senator J. Bennett Johnston, members of the Subcommittee on Energy and Water Development, I thank you for this opportunity to present the views of the Gila River Indian Community (Community) with respect to appropriations for the Central Arizona Project (CAP). Our Reservation is located in Arizona adjacent to the greater Phoenix Metropolitan area and covers approximately 373,000 acres of land. The Community enrollment exceeds 12,000 members of both Pima and Maricopa descent. Pimas have farmed the Gila River Valley for over two thousand years and today agriculture remains the base of the Community's economy.

The Community has a strong interest in CAP appropriations. It is likely that the Community will be the single largest water user when the system to and on the Reservation is completely constructed. The Community will be one of the last and largest green belts in Central Arizona.

In 1976, Department of Interior Secretary Kleppe allocated 173,100 acre feet of CAP water to the Community for agricultural purposes. In 1980, Interior Secretary Andrus continued the allocation of 173,100 acre feet of CAP water for agricultural purposes for the Community and offered us a water delivery contract. The Community's Council rejected the proposed contract offer primarily because of the provision in the contract mandating an exchange of over half of the Community's CAP water for effluent water produced by nearby towns and cities.

On June 28, 1991, the Department through Secretary Lujan again offered to contract with the Community for CAP water. Furthermore, the Secretary caused to be published in the Federal Register a Notice which modified the CAP water allocation to the Community to eliminate the requirement the Community must accept substitute or effluent water. The Notice further stated that the provision eliminating the requirement that the Community's CAP allocation must be credited against the Community's Winter's rights, when and if such rights are finally determined. On January 22, 1992, the Secretary caused to be published, a public notice in newspapers in Arizona, regarding the proposed Water Delivery Contract and comments were solicited from the general public.

A Water Delivery Contract was finally signed by the Secretary of Interior on October 22, 1992. The Community is aggressively planning a water conservation management plan and are into a public involvement program for the planning and design of the system.

The community requests a total of $6,500,000 for on and off reservation CAP costs as an add on to the fiscal year 1994 budget. The Community is desirous of performing the necessary planning, design and construction of a delivery and distribution system for CAP water on as soon as possible. We have been advised that the Bureau of Reclamation (BOR) has expended approximately $5,198,319 for the Community's distribution system planning, design, and construction through September 30, 1991. With the signing of the contract we feel that monies in the following categories must be added to the appropriations for fiscal year 1994:

Contract costs planning	*1994*
T&E species study	117
Cultural resources—surv/test/report	565
GRIC archaeology crew	300
Liaison co-op agrmt	300
Aerial mapping photos	20
Map digitizing	300
District system and related structure (construction)	1,400
Planning	1,750
USDA-SCS, WCMP	75
GRIC realty asst	20
USGS soils/lab/test	40
Monitor str. gages	2
Predesign, design and construction	
Subtotal	3,139
Contingency (25%)	785
Total contract costs	3,924

Contract costs planning	*1994*
Non-Contract Costs: Pre-design, design and construction	400
Subtotal	1,750
Contingency 25%	438
Total non-contract costs	2,188
Grant total	6,112
Proposed budget total	6,500

In the event a total add-on request is not feasible at this time, we request your support in persuading the Bureau of Reclamation to re-program funds during fiscal year 1994 to meet the needs of the Community. There is a need for additional appropriations to accelerate the whole planning process. With accelerated planning and construction simultaneously taking place in addition to other contractual arrangements, the Community will be in a better position to plan their destiny.

I thank you for this opportunity to present the views of the Community with respect to appropriations for CAP to specifically benefit the Gila River Indian Community.

STATEMENT OF HARRY A. CRUYE, JR., CHAIRMAN, GILA RIVER FARMS

Mr Chairman, we appreciate the opportunity to appear before this subcommittee today to request funds for FY1994 for the Gila River Farms, an enterprise of the Gila River Indian Community.

The Farms Board sincerely appreciates your support for past appropriations and we can assure you that it has resulted in a very viable and beneficial agricultural program.

The Gila River Farms requests $1,750,000 for FY1994 under the Bureau of Reclamation's Central Arizona Project—Indian Distribution Development Program (CAP–IDD).

Your approval of this request will allow the Gila River Farms to continue irrigation development on Sacaton Ranch South Phase 2 and will help make the Farms a successful farming operation.

The Gila River Indian Community has signed its CAP water delivery contract and, therefore, is eligible to receive funds under the CAP–IDD authorization. Funds that we are requesting will be used to construct a distribution system on the Farms to the developed land under criteria established by the Bureau of Reclamation. In addition, the Community will be requesting funds for development of land and distribution systems for other lands within the Community.

Many economic benefits will be derived from this development through additional jobs, increased profits from the Farms to the Community and secondary benefits.

Jobs are very important on the Reservation where unemployment rates have been around 38%. Gila River Farms is the largest non-governmental employer of Tribal members and has been successful for over 25 years in hiring and retaining Tribal members for productive jobs.

Direct employment opportunities through continued development will be both short-term for construction and long-term for the cultivation and harvesting of crops. The construction work will be performed entirely by force account with almost two-thirds of the construction crews being Tribal members. The cultivation and harvesting of crops is very labor-intensive providing many employment opportunities, perhaps as many as 750 jobs for Tribal members.

The Plan of Operations under which the Farms is organized requires that one-half of the Farms' net revenues be paid to the Community. Historically the Farms has been a dependable profit-making enterprise and has consistently made payments to the Community.

In summary, Mr. Chairman, we respectfully request that this subcommittee provide the funds for FY1994 for this very worthwhile project which will enhance the Community's ability to provide jobs and economic benefits to its members.

Thank you for your consideration.

STATEMENT OF GILA RIVER FARMS

Dear Senator Johnston, the Gila River Indian Community (Community) has approved the signing of its Central Arizona Project (CAP) water delivery contract. The Community is anxious to start improving and expanding their irrigation works to take advantage of the CAP water.

Gila River Farms (Farms), an entity of the Community, has been rehabilitating and developing new farmland since 1979 (figures 1 and 2). The Farms is currently constructing irrigation facilities on Sacaton Ranch South and is planning development for Sacaton Ranch South Phase 2 (figure 3). In order to continue the development in a timely manner, the Farms is submitting this supplement to the fiscal year 1994 add-on funding request for CAP-Irrigation Distribution Division (CAP–IDD) funds submitted by the Community. This supplement will provide support for the construction line item of the funding as follows:

Sacaton Ranch South Phase 2	$1,750,000

The approval of the Community's request will allow the Farms to design and construct a water distribution system for the Sacaton Ranch South Phase 2 project area.

The development of the first phase of Sacaton Ranch South is nearly complete. An environmental assessment was prepared which resulted in a Finding of No Significant Impact (FONSI). All of the designs have been completed and construction is scheduled to finish in early 1994.

The Farms has begun planning for the next phase of development—Sacaton Ranch South Phase 2. The FONSI prepared for Sacaton Ranch South covers this additional area. The project includes the development of 2,770 acres of farmland, the construction of a distribution system and crop establishment costs for 1,000 acres of citrus trees. The areas where the citrus trees are proposed to be planted are shown in figure 4. Land leveling, field ditches, and the planting and cultivation of the citrus trees are proposed to be funded with add-on appropriations through the United States Department of the Interior, Bureau of Indian Affairs (BIA). The Farms will undertake the construction utilizing Force Account Construction crews funded by a PL 93–638 contract through the BIA.

The cost for the irrigation construction on Sacaton Ranch South Phase 2 is anticipated to be $7,427,618 in 1993 dollars as shown in table 1. Two sources of funding will be used for the project; direct appropriations through the Public Law 93–638 contract with BIA and Central Arizona Project—Indian Distribution Division (CAP–IDD) authorized funding.

The Community has signed its CAP water delivery contract, so the irrigation distribution system costs are to be designated as an obligation of the federal government under the CAP–IDD authorized funding. Project facilities that can be constructed with CAP–IDD funding include the distribution system components required to deliver water to the high corner of every 160 acres of developed land. Each lateral turnout distributes water to four fields, or approximately 160 acres, so all costs associated with the laterals and canals will be funded through CAP–IDD. A reservoir is also proposed for construction with CAP–IDD funds to make beneficial use of excess water and to accurately discharge water to over 4,100 acres of farmland. The estimated design and construction costs of these items are shown in table 1.

The cost of the project facilities that will be constructed with CAP–IDD funds is estimated to be $1,978,222. Of this amount, $1,750,000 is requested for fiscal year 1994 in order that the Southside Canal, laterals and reservoir can be constructed in a timely manner as shown on figure 5. The balance of the CAP–IDD funding requirements for this project ($228,222) will be requested in fiscal year 1995 so that construction of Lateral L–4 can be completed. The PL 93–638 add-on funding will be requested over a 3-year construction period so that those construction items can progress without delay.

The development of Sacaton Ranch South and Sacaton Ranch South Phase 2 brings much-needed economic benefits to the Gila River Indian Community. Currently, unemployment on the Reservation is about 38 percent, and this development will create 45 construction jobs valued at over $1.5 million. Long-term job opportunities will also be created for the cultivation and harvest of the orchards, in which payroll expenses are expected to be $1.75 million per year. The project will also generate $6.1 million annually in net profits which will be distributed to the Community and reinvested on the Farms. Secondary benefits to the Reservation and surrounding communities are estimated to be $39 million over the term of construction and $38 million annually for the life of the project.

The following report will further explain the development of Sacaton Ranch South and Sacaton Ranch South Phase 2. The Farms continues to demonstrate successful performance in irrigation construction and crop establishment, while maintaining a profitable farming enterprise. The Farms requests that appropriated funds be made no-year ending and available until expended. The Farms will contract through its PL 93–638 contract to continue constructing the project features funded with these appropriations.

On behalf of the Gila River Farms Board, I request that you strongly consider the Community's funding request and future appropriation requests. These requests provide the Farms with funding to meet its and the Community's goals while the federal government's obligations are being partially satisfied.

Gila River Farms—Sacaton Ranch South Phase 2

INTRODUCTION

Gila River Farms (Farms) is an economic enterprise of the Gila River Indian Community (Community). It is comprised of five ranches, one of which is Sacaton Ranch (figure 1). Sacaton Ranch is located west of Interstate 1–10, about 30 miles south of Phoenix, Arizona on the Gila River Indian Reservation (Reservation).

The Farms has been committed to the rehabilitation and expansion of Sacaton Ranch since 1979, when it received a Public Law 84–984 Small Reclamation Act loan. Since then, the Farms has received a second P.L. 84–984 loan to continue the development of Sacaton Ranch. With these funds, over 8,900 acres of land have been rehabilitated, along with the associated canals, laterals, structures, office and shop complex (figure 2). These loans obtained by the Farms were used in part to rehabilitate San Carlos Indian Irrigation Project canals and laterals that service the Sacaton Ranch.

SACATON RANCH SOUTH

In 1986 the Farms began requesting, through BIA, funding to continue irrigation construction on Sacaton Ranch South. As a requirement for this funding, an environmental assessment was prepared which resulted in a FONSI, and SCIIP water rights were transferred to the entire Sacaton Ranch South, which includes the lands in the proposed Phase 2 development. Since the funding was not included in BIA irrigation construction budgets the Farms made requests to Congress for add-on appropriations to the BIA budgets. The first add-on appropriation was approved for fiscal year 1987. The Farms then executed a PL 93–638 contract in 1988 with BIA to undertake the irrigation construction. A new contract was executed in 1991 and will be modified to continue the irrigation construction on the proposed Sacaton Ranch South Phase 2. Figure 3 shows the area developed and items constructed for Sacaton Ranch South.

Beginning in fiscal year 1988, a crop establishment program was initiated for the planting and maintenance of citrus and olive orchards. In the program, 960 acres of citrus and 620 acres of olives have been or will be planted. This allows the Farms to diversify the cropping pattern, increase profitability and provide further employment opportunities to Community members. The PL 93–638 contracts were modified allowing the Farms to execute the crop establishment program and to continue with additional plantings each year utilizing appropriated funds.

SACATON RANCH SOUTH PHASE 2

The area considered for Sacaton Ranch South Phase 2 is west and south of the present construction and farming area as shown on figure 3. The project starts where construction of Sacaton Ranch South ends and develops farm land between the Southside Canal and the—reservation boundary. The project area also includes part of a section of State of Arizona land that was originally excluded from consideration. This land is now being included in the project because the state government has indicated an interest in transferring the land to the Gila River Indian Community. Except for the state land, the project area has already been environmentally cleared and has SCIIP water rights. The area encompasses 2,770 acres and includes land leveling and the construction of a regulating reservoir, 112,050 feet of canals and laterals, and 296 structures.

Construction of the project features will be by Farms Force Account Construction crews. These crews have constructed all of the project features under the second Public Law 84–984 loan and the Public Law 93–638 contracts. With timely approval of funding, the crews will be able to move directly from construction of the Sacaton Ranch South to Sacaton Ranch South Phase 2. As shown on figure 5, the land leveling crews will continue construction through May 1997, and the structures crews will finish construction in September 1997.

The cost for the irrigation construction is anticipated to be $7,427,618 in 1993 dollars. This cost was calculated by using historical construction costs for Force Account Construction and including allowances for engineering and administration as shown in table 1. Two sources of funding will be used for the project; Central Arizona Project—Distribution Irrigation Division (CAP–IDD) authorized funding; and direct appropriations through the P.L. 93–638 contract with the BIA.

The Community has signed its CAP water delivery contract, so the irrigation distribution system costs are to be designated as an obligation of the federal government under CAP–IDD. Project facilities that can be constructed with CAP–IDD funding include the distribution system components required to deliver water to the high corner of every 160 acres of developed land. Each lateral turnout distributes water to four fields, or approximately 160 acres, so all costs associated with the laterals and canals will be funded through CAP–IDD. The estimated design and construction costs of these items are shown in table 1.

The project area is at the terminus of the Southside Canal, which historically has had large fluctuations in delivery because a large amount of the excess flow in the SCIIP is diverted to the Southside Canal, as well as any excess flows due to storm events. Therefore, a regulating reservoir is proposed for construction with CAP–IDD funds to make beneficial use of excess water and to accurately discharge water to Laterals L–2, L–3 and L–4, a service area of over 4,100 acres.

The cost of the project facilities that will be constructed with CAP–IDD funds is estimated to be $1,978,222. Of this amount, $1,750,000 is requested for fiscal year 1994 in order that the Southside Canal, laterals and reservoir be constructed in a timely manner as shown on figure 5. The balance of the CAP–IDD funding requirements for this project ($228,222) will be requested in fiscal year 1995 so that construction of Lateral L–4 can be completed.

The PL 93–638 add-on funding through the BIA will be requested over a 3-year construction period so that those construction items can progress without delay.

The planting of citrus trees was started with fiscal year 1988 funding and modification of the first Public Law 93–638 contract. Phase 2 development will include the establishment of an additional 1,000 acres of citrus (figure 4). This amount of citrus is planned to take advantage of all of the possible planting area that is higher in elevation. This land will be less susceptible to frost damage, is on new ground that has less chance of soil borne disease being present that would affect the trees and has desirable soil characteristics. It also generates the volume of citrus to allow the Farms to consider building a pre-sorting and packing facility. The 1,000 acres is proposed to be planted in three years of nearly equal plantings in fiscal year 1994, fiscal year 1995 and fiscal year

The development of the additional acreage for the growing of citrus allows the Farms to diversify their overall cropping pattern and reduce their dependence on government supported crops, such as cotton and wheat. The citrus, with the variety of trees planted on Sacaton Ranch South and the projected planting on Phase 2, will be harvested continuously from October to June which provides a continuous cash flow, reducing the Farms need for crop loans for annual crops. The citrus and olives also have higher profitability than traditional field crops, which increases the Farms profits that are shared with the Community, and used to fund social services and other Community programs.

ECONOMIC BENEFITS

Many economic benefits will be derived from this development through: more jobs, increased profits from the Farm to the Community, increased profits reinvested by the Farm and through the secondary economies that the increased cash flow on the Reservation creates.

Jobs are very important on the Reservation, where long-term unemployment rates have been around 38 percent. A large number of the Tribal members live in and around Sacaton, which is 20 miles away from even the closest off-Reservation employment opportunities. Gila River Farms is located about four miles from Sacaton and is the largest non-governmental employer of Tribal members. The Farms has been very successful for over 25 years in hiring and retaining Tribal members for productive jobs while earning a profit.

Direct employment opportunities through the continued development will be both short-term for construction and long-term for the cultivation and harvest of the crops. The construction of the project features will be entirely by force-account construction. Currently, almost two-thirds of the construction crews are Tribal members. Anticipated employment required for the construction of the project features is approximately 45 persons through 1996, when the construction is scheduled to be completed. From the current breakdown of construction costs for the force account construction crews, it is estimated that about $1,500,000 of the estimated construction costs for the Phase 2 construction will be paid as wages, mostly to Tribal members.

The cultivation and harvesting of the trees is very labor intensive, which provides other employment opportunities for Community members. A force of over 750 people could be required for the cultivation and harvest of the citrus and olives. When all of the trees are planted, approximately $500,000 per year will be paid as wages for labor required for the cultivation of the orchards. At maturity, the harvest of the orchards will require about $1,250,000 per year in labor expense.

The Plan of Operations under which the Farms is organized states that one-half of the Farms' profits will be paid to the Community. Historically, The Farms has been a dependable profit-making enterprise and has consistently returned profits to the Community. The crop budgets for the orchards indicate that the net income of the orchards after cultivation and harvest expense will-increase from $373,000 in 1997 to over $5,500,000 per year in 2007, when all of the trees are mature. In addition, the 2,775 acres of other farmland in Sacaton Ranch South and Sacaton Ranch South Phase 2 should return an annual net income of $650,000. After some of the Farm overhead expenses are deducted, half of the profits will be returned to the Community's general fund to be used for the benefit of Community members. The profits that are retained by the Farms will be reinvested to make the Farms more profitable. Historically, the Farms has used its' share of the profits to construct a cotton gin, grain storage facilities and hay barns and to improve farmland at other ranches. Plans for the future include a fish farm and citrus packing shed. All of these investments have improved the Farms' bottom line and provided jobs for Community members.

SECONDARY ECONOMIC BENEFITS

In addition to the direct benefits of jobs and increased profits that the project creates are the secondary benefits that go to the Reservation and surrounding communities. The increased money flow due to the project will improve secondary economies in areas such as construction and farm equipment, construction materials and farm supplies, as well as goods and services for the people who are employed through the jobs created by this project. Economists estimate that every dollar increase in economic activity in this industry will generate an additional 3 dollars in the secondary economy, therefore, the $13,000,000 requested for construction and crop establishment for this project will generate an additional $39,000,000 in secondary benefits. Because of the increased acreage of the Farms due to the development of Sacaton Ranch South and Sacaton Ranch South Phase 2, there will be increased annual revenues from the crops of about $12,700,000 per year which will generate about $38,200,000 annually in secondary benefits.

TABLE 1.—GILA RIVER FARMS SACATON RANCH SOUTH PHASE 2 IRRIGATION CONSTRUCTION FISCAL YEAR 1994 FUNDING REQUEST—JANUARY 1993

Construction item	Estimated cost	Add-on funding	CAP–IDD funding	CAP–IDD funding appropriations fiscal year—	
				1994	1995
Block 35	$537,535	$537,535			
Block 36—part	58,399	58,399			
Block 37	469,723	469,723			
Reservoir	679,848		$679,848	$679,848	
Block 38	825,581	825,581			
Block 39	525,540	525,540			
Southside Canal	219,798		219,798	219,798	
Lateral L–3	478,556		478,556	478,556	
Block 40	682,098	682,098			
Block 41	907,457	907,457			
Block 42	651,271	651,271			
Lateral L–4	312,585		312,585	117,524	$195,061
Subtotal	6,348,392	4,657,604	1,690,788	1,495,726	195,061
Engineering (10%)	634,839	465,760	169,079	149,573	19,506
Administration (7%)	444,387	326,032	118,355	104,701	13,654
Total funding	7,427,618	5,449,397	1,978,222	1,750,000	228,222

NOTE.—Add-on funding will be requested to be advanced in fiscal years 1994, 1995, and 1996.

Source: SFC Engineering, 1993.

PIMA COUNTY AND TUCSON, AZ, AREA PROJECTS

Senator DECONCINI. I also want to place in the record a statement from the Pima County Department of Transportation and Flood Control District.

[The statement follows:]

STATEMENT OF THE PIMA COUNTY, AZ, DEPARTMENT OF TRANSPORTATION AND FLOOD CONTROL DISTRICT

On behalf of the Pima County Department of Transportation and Flood Control District, I want to thank the Subcommittee for this opportunity to present our priorities for fiscal year 1994, and, at the same time, to express our appreciation for your support of the District's projects in years past. The District has five water resources priority issues—the Corps of Engineer's Rillito River project; the Tucson Diversion Channel project; the Tucson Drainage Area Study; (Tucson Arroyo/Arroyo Chico), the Lower Santa Cruz River; and the Bureau of Reclamation's Rillito Creek Groundwater Recharge Demonstration project—which we are requesting the Subcommittee's support for in its Energy and Water Development Appropriations Bill for fiscal year 1994. The following outlines our requests:

RILLITO RIVER PROJECT

We are requesting the Subcommittee's support for including $4,200,000 for construction of the Rillito River flood control project in fiscal year 1994 Energy and Water Development Appropriations Bill under the Corps of Engineers' program. This flood damage prevention program plan, which consists of soil cement bank protection and grade controls structures, will stabilize the streambanks, thus preventing channel shifts of hundreds of feet and severe flood-related damages which accompany it. The dramatic flash floods that plague our area have caused widespread damages this January and over the last several years to both public and private property. For example, the floods of March and December 1978 and October 1983 caused extensive damages to structures and land along unprotected banks of the river, and to roads, bridges, utilities, and existing bank protection. In fact, the 1983 event was the flood of record, both in terms of magnitude of flow and damages sustained, with the U.S. Geological Survey estimating the 29,700 cubic feet per second flow at First Avenue as slightly less than a 50-year frequency event, and total damages to the area estimated at over $100 million.

In January of this year, the Pima County metropolitan area was hit with serious and dramatic flood events which resulted in another presidentially-declared flood disaster. This devastating series of flood events, which has been estimated to be a 50–100 year event, caused the Rillito River to rise to flood stage resulting in significant bank failure along the river and inundation of adjacent low-lying areas. During its peak, the flood flow was measured at 27,000—29,000 cubic feet per second (cfs), which matched the high-volume flow during the 1983 presidentially-declared flood disaster.

Bank loss was dramatic, including the loss of hundreds of feet in some areas, with private buildings and public infrastructure collapsing into the river. As a result of the losses, thousands of citizens were left stranded. While local officials are still conducting the damage assessments, estimates have placed the storm damage at several million dollars. What prevented further damage was the fact that a portion of the project had been constructed earlier under the Corps' Section 104 credit program and provided significant protection. However, the whole project needs to be completed to provide comprehensive protection to now-vulnerable areas. Once in place, the Rillito River project will stabilize the streambanks and streambed to protect against these dramatic flood flows. The project is fully authorized by Congress for construction and we have executed a Section 215 agreement to advance a critical portion of the project using local funds.

Mr. Chairman, this is the priority project for the County. Our commitment to this project is evidenced by our willingness to share in the costs of the project in full accordance with Public Law 99–662, the Water Resources Development Act of 1986. In fact, our local costs expended to date in an effort to stabilize the area and protect public Safety after the 1983 floods have reduced the original total project cost over $6 million. This fiscal year 1994 funding we are now urgently requesting will enable the Corps to proceed to a much-awaited construction start.

TUCSON DIVERSION CHANNEL

The District is seeking the Subcommittee's support for including $2,215,000 in operation and maintenance funds in the Committee bill to continue the development of recreational facilities, including a linear park and associated recreational facilities along the Tucson Diversion Channel. This channel project was constructed by the Corps in the early 1960's and the District now operates the project. The District is seeking to pursue development of the linear park under the Corps' Code 710 program, which provides federal funding for recreational facilities at Corps' projects which are already completed. The District has a portion of the project under design and stands ready to cost-share the remainder of the design and construction of the project at the prescribed 50 percent federal/50 percent local split.

In 1981, the Corps of Engineers and the District, under the Code 710 program, completed a recreational master pan for the Tucson Diversion Channel and Ajo Detention Basin. The first phase of the master plan called for the construction of Sam Lena Park and the Ajo Detention basin, which has been completed. The second phase of the master plan called for construction of a lake at the detention basin, with associated facilities. The idea of a lake at the detention basin is no longer operative. The District has asked that the Corps re-open the master plan to replace the lake with a linear park and to provide funding for design and construction under the cost-sharing provisions of the Code 710 program. The Corps has advised that the linear park would be eligible under the Code 710 program and we are seeking the Committee's help in inserting the requested funding to continue the development of the project in its bill.

TUCSON DRAINAGE AREA STUDY (TUCSON ARROYO/ARROYO CHICO)

The third priority of the District is to support $450,000 under the Corps' program to continue the survey of the Tucson Drainage Area, in particular, the Tucson Arroyo/Arroyo Chico portion of the study. Last summer, Pima County Flood Control District entered into a feasibility study cost-sharing agreement for the Tucson Arroyo/Arroyo Chico part of the Tucson Drainage Study. The study area includes Tucson Arroyo/Arroyo Chico within the city limits of Tucson, Arizona and its tributaries. Currently, the feasibility study is underway, with the local sponsor providing funding and in-kind services to meet its local share. This fiscal year 1994 funding would allow the feasibility study to move forward on schedule.

LOWER SANTA CRUZ RIVER, AZ

A fiscal year 1994 appropriation of $400,000 is requested to continue studies to resolve the historically serious flooding problem which exists along the Lower Santa Cruz River in Pima and Pinal Counties, Arizona. These funds would be used to continue the planning effort which is currently taking place as part of a Corps of Engineers feasibility phase study.

Summary recommendations

Rillito River project, construction	$4,200,000
Tucson diversion channel, operation and maintenance	2,215,000
Tucson Drainage Area (Tucson Arroyo/Arroyo Chico), survey	450,000
Lower Santa Cruz River, survey	400,000

PREPARED STATEMENT FOR THE RECORD

Senator DECONCINI. The next witnesses are the Cochiti Indians, Pueblo de Cochiti of New Mexico, Cedric Chaves, the governor of the Pueblos.

Is Mr. Chavez here?

If not, we will put their statement in the record.

[The statement follows:]

STATEMENT OF CEDRIC CHAVEZ, GOVERNOR, PUEBLO DE COCHITI

My name is Cedric Chavez, and I am the Governor of the Pueblo de Cochiti. I wish to submit this statement on behalf of the Pueblo de Cochiti of New Mexico, regarding the needs of our people in connection with the waterlogging of our traditional agricultural lands through extensive seepage of water under the Cochiti Dam.

After many years of litigation, see, *Pueblo de Cochiti. et al.* v. *U.S.A. et al.*, 647 F.Supp. 538 (D.N.M. 1986), the Pueblo and the United States reached a negotiated settlement of that lawsuit. That settlement is set forth in the Report on Investigations, Pueblo de Cochiti Wetfield Solution (July, 1990). Last year the Congress approved that settlement and made a specific authorization for the appropriation of funds for its implementation in Public Law 102–358. As part of the settlement, an underground gravity drawn system for de-watering our lands will be built by the U.S. Army Corps of Engineers.

Last year, Congress appropriated an initial $1.9 million in the Fiscal Year 1993 Energy & Water Development Appropriations Act (Public Law 102–377) to begin implementation of the settlement and specifically to commence construction of the drain system.

That followed appropriations in FY 1988 of $750,000 for preliminary planning, design and engineering for the project (Public Law 100–202), and later Congressional action in fiscal year 1992, to authorize reprogramming of $300,000 in FY 1991 Corps funds to complete final design specifications for construction of the drainage system.

As part of the authorized settlement, the Pueblo and the Government entered into a stipulation for dismissal of all claims in the lawsuit. In reliance upon the Congressional approval and authorization, and the subsequent Federal Court approval of the settlement, the Pueblo in December, 1992, requested dismissal of all claims in the lawsuit. The Federal Court's order approving dismissal of all claims was entered December 23, 1992, and became binding upon all patties on March 7, 1993.

The Pueblo and the Government are now nearing completion of contract specifications and bid solicitation package for the drainage project with a July, 1993, target date for construction contract award. The Pueblo and the Government are also nearing completion of the various other ancillary agreements and easements necessary to fully implement the settlement.

To this point, the Pueblo has done all it is required to do for its part under the authorized settlement. It is now time for the Congress to fully fund the settlement so that our community can begin to heal the injuries we have suffered.

For FY 1994, we are requesting that Congress provide the remaining funding required for implementation of the settlement. The total amount of our request and the amount required to fully fund the settlement is $11,073,900, of which $3,172,000 will be the balance of funds required to complete construction of the underground drainage system, $4,449,100 will be for operation, maintenance and replacement of the drainage system, and $3,422,800 will be for past damages and field restoration costs. This request is in addition to the moneys previously appropriated for the project.

BACKGROUND

The Pueblo de Cochiti did not support the building of Cochiti Dam in 1975, which was to occupy or encumber some 12,850 acres of our 50,000-acre ancestral homeland. We were told, however, that we had no choice in the matter, and would have to agree to a perpetual easement, allowing the construction, or the land would be condemned. In return for a permanent easement of 4,064 acres and a larger flowage easement granted to the Corps of Engineers, the Pueblo was paid $145,200.

Cochiti Dam is located at the lower end of the White Rock Canyon on Cochiti lands and extends across the Rio Grande and Santa Fe Rivers. The dam is one of the 10 largest earthfill dams in the country. In addition to its uses in flood and sediment control, the surface lake provides fish and wildlife enhancement and recreation for the general public. This dam cost some $100 million in 1975 dollars to construct. The settlement costs are approximately 5% of original dam construction costs in 1993 dollars.

Beginning in the late 1970s, as the reservoir was filled, water began to seep underneath the dam, causing the water table of our adjacent lands to rise. While the Corps always knew that the dam would seep, this fact was never communicated to us. Even the Corps was surprised at the extent of the seepage that occurred, since it was never anticipated that seepage from the dam would cause a drastic rise in the groundwater table on virtually all of our agricultural land downstream. This seepage ultimately caused our traditional agricultural fields to become saturated, rendering them virtually unusable. It must be remembered that of the 50,000 acres belonging to the Pueblo, only 800 acres have traditionally been suitable for irrigated agriculture. These lands were used for some 700 years without disturbance to provide for the needs of our community. Seepage from the dam has made more than 600 acres complete unusable because of high water table conditions. The remaining acreage is small parcels, which are practically unusable because of their scattered location and limited size. Additional losses to our community have come in the form of salt accumulation, which has killed native grasses and decreased grazing capacity on our lands; a recurrent mosquito problem because of standing water; and damage to fences, roads and irrigation ditches.

The loss of our lands has been not a mere economic hardship, but has also meant the loss of fundamental and spiritual aspects vital to the Pueblo. We are no longer able to cultivate the crops required for our spiritual as well as our physical sustenance. The seepage damage has been so extensive, it has been impossible for us to carry out many traditional religious practices. A number of religious shrines have been desecrated, either from construction or flooding.

The ever-increasing saturation of our fields from the seepage had finally made it totally impossible for us to carry on our traditional agriculture—a change that struck at the heart of our tradition and religion. There was no way for us to accommodate ourselves to that change. We feared that within a few years an entire generation of Cochiti youth would have grown up to adulthood without access to our ancestral lands and their benefits and the religious traditions which are so tightly interwoven with our lands. We were also deeply concerned that if the seepage from the dam was not brought under control, other Pueblo land, including land on which our village itself and kiva are located, could be similarly damaged. These concerns were the predicate for our entry into the agreed settlement.

We have no illusions that the agreed settlement can make us fully whole. There is no way to put things back the way they were before the dam was built. We have had to learn to coexist with the dam, despite the grave difficulties it causes us in carrying out our traditions. We have made whatever adjustments that are possible for us to make and we have in good faith fully accepted the terms of the final settlement approved in P.L. 102–358 and by the Court.

SETTLEMENT AGREEMENT

In 1985 the Pueblo filed suit for injunctive and other relief to remedy the seepage problem. In 1986 the Federal District Court in New Mexico denied the Federal Government's motion to dismiss the Pueblo's claim. The Court also left our claim for money damages intact. In 1988, Congress enacted Public Law 100–202, which sought to provide a legislative remedy by directing the Corps of Engineers to get together with us to negotiate a solution to the seepage problem, and to submit a negotiated agreement back to the Congress. Negotiations began that year. In July, 1990, these negotiations resulted in a solution which involves the construction of underground drains to intercept the seepage from the dam.

The precise terms of the settlement agreement and the legal, moral and technical justification for it are set forth in great detail in the Corps' July 24, 1990, Report on Investigations, Wetfield Solution. In the report, the Corps expressly acknowledges, without qualification, that "the wetfields problem is a direct result of ground water flow under Cochiti Dam." The Corps also expressly states that "the only acceptable solution to the wetfields problem is a horizontal buried drainage system." We appreciate these candid admissions by the Corps.

The settlement agreement approved and authorized by the Congress and the Court is composed of three parts:

Construction.—The seepage from the dam will be intercepted by a system of buried gravity drains, a process that will dry out the lands in order to make them available to us again for traditional farming activities and other purposes. This system will also prevent the migration of seepage to other Cochiti lands, and to other Indian and non-Indian lands to the south of the Pueblo. The Bureau of Reclamation was selected as the design agent for the drain system. Final design and construction documents are now being completed. We anticipate that pursuant to the initial fiscal year 1993 appropriation of $1.9 million, the construction contract award will take place in July, 1993. An additional $3,172,000 will be required to complete construction.

Past damages and field restoration.—The settlement provides that the Pueblo will be compensated for past infrastructure damages and crop losses, and provided funds for the restoration of the 800 acres to renewed agricultural use. The agreed to compensation amount (assuming a full fiscal year 1994 appropriation) is $3,422,000.

Operation, maintenance and replacement.—Finally, the settlement requires establishment of a sinking fund to provide for operation, maintenance, repair and replacement of the drainage system on a fifty-year cycle, without the need of further Congressional appropriations. Because the Corps of Engineers does not include in its operations and maintenance budget structure such things as maintenance of an agricultural drain field off Corps lands, and because the parties agreed the Pueblo should not have to be responsible for operating and maintaining a system that had to be installed through no fault of its own, the operation and maintenance fund activities provided under the settlement agreement will be administered by the Bureau of Indian Affairs. The BIA has agreed to undertake this responsibility. A complete environmental assessment on the drainage project, including a finding of no significant impact, was completed by the Corps of Engineers in October, 1990. The agreed amount for this O&M fund (assuming a full fiscal year 1994 appropriation) is $4,449,100.

In return for the Congressionally authorized and Court approved agreement to install the drainage system, the agreement to pay damages and field restoration funds, and to establish the operation and maintenance fund, the Pueblo's pending lawsuit has been fully dismissed with prejudice and the Federal Government has been released from all liability except to perform the obligations agreed upon in the settlement agreement.

CONCLUSION

The Pueblo de Cochiti has suffered greatly as a result of the Cochiti Dam itself and the resulting seepage into our agricultural lands. We are grateful to the Congress for authorizing, in Public Law 102–358, appropriations to fund the settlement of our lawsuit and to provide for restoration of our lands.

That settlement probably would not have occurred, and certainly would not have occurred so quickly, without the Congress' early direction in Public Law 100–202, that the parties attempt to resolve this matter by settlement, and for the appropriations made pursuant to Public Law 100–202, Public Law 102–104, and Public Law 102–377 to further that process.

We ask now that Congress appropriate for fiscal year 1994 the remaining funds to fully implement the final settlement agreement approved in Public Law 102–358 and set forth in the Report on Investigations, Pueblo de Cochiti Wetfields Solution (July, 1990).

ADDITIONAL PREPARED STATEMENTS FOR THE RECORD

Senator DECONCINI. I understand that the subcommittee has received several additional statements covering projects in the southwestern area of the country.

Without objection, those statements will be incorporated in the record at this point.

[The statements follow:]

STATEMENT OF THE STATE OF COLORADO

Colorado supports the Bureau of Reclamation Colorado River Salinity Control Program projects in our state and throughout the River Basin. We respectfully request that Congress appropriate $32,800,000 for this purpose in fiscal year 1994.

This statement is submitted by the Honorable Roy Romer, Governor of Colorado; Mr. Ken Salazar, Executive Director of the Colorado Department of Natural Resources; and Daries C. Lile, Director of the Colorado Water Conservation Board, which is the state agency charged with the development of Colorado's water resources.

COLORADO RIVER SALINITY PROGRAM APPROPRIATION

The seven states of the Colorado River Basin have endorsed a coordinated, basinwide approach to the reduction of salinity in the Colorado River. The salinity control units being planned and constructed by the Bureau of Reclamation (Reclamation) are an integral component of the overall salinity control program. The seven Basin States, acting through the Colorado River Basin Salinity Control Forum and Advisory Council, have filed a detailed statement with this committee. The Forum seeks, and Colorado supports, the sums set forth therein.

As a headwater state, salinity control in Colorado is particularly important to assure downstream water quality for the other six Basin States. The entire expenditure of construction program funds ($31.5 million) will occur on four projects located within the State of Colorado: Paradox Valley, McElmo Creek, Grand Valley, and Lower Gunnison. Colorado is particularly pleased with the Reclamation efforts for construction of the winter water system in the Lower Gunnison Salinity Control Unit ($4.1 million) and continuing construction on the Grand Valley Salinity Control Unit ($17.0 million). In both instances, the State and local water users have worked closely with Reclamation in order to enable these salinity control units to go forward. Colorado has met the schedules requested of us by Reclamation and in order to continue on schedule this committee needs to approve the necessary funding for FY 1994.

The State of Colorado recognizes the extraordinary pressures on Congress and the President to resolve the difficult budget situation facing the nation. However, as studies have repeatedly demonstrated, delays in implementation of salinity controls do not merely defer expenditures into future years, but result in the need for a larger, more costly overall program. This is a result of the increased accumulation of salt that enters the system during the period of delay. This situation has already occurred in earlier years, and the State of Colorado strongly urges that the full amount needed to maintain the program schedule be appropriated in fiscal year 1994.

In the future, additional amounts of salt reduction, beyond the capability of presently planned and authorized control units, will be required to meet the water quality objectives which benefit all Basin water users. The State of Colorado therefore also supports a budget for the plan formulation ($1.3 million) necessary to identify further cost-effective salinity control strategies and projects throughout the Basin.

Finally, the State of Colorado supports adequate funding for completion, operation, and maintenance of the Yuma Desalination Plant, authorized as part of Title I of the 1974 Salinity Control Act. This long awaited project will make an additional increment of water available for use in the Basin and the Republic of Mexico.

Thank you for your continued support.

Statement of the Upper Colorado River Commission

SUMMARY OF SPECIFIC ACTION REQUESTED

Appropriation of funds recommended by representatives of the States of Colorado, New Mexico, Utah and Wyoming for the Colorado River Storage Project and participating projects and the Colorado River Salinity Control Program.

Mr. Chairman and members of the Subcommittee, it is my pleasure to provide brief testimony for this Subcommittee on behalf of the member States of the Upper Colorado River Commission in the Colorado River drainage with respect to the fiscal year 1992 budget for Bureau of Reclamation activities in our member States' area. These programs include both Colorado River Storage Project Act and Colorado River Salinity Control Program activities.

The Upper Colorado River Commission is an interstate compact administrative agency created by the Upper Colorado River Basin Compact of 1948. The member States of the Upper Colorado River Commission are: Colorado, New Mexico, Utah and Wyoming. Since its inception, the Commission has actively participated in the development, utilization and conservation of the water resources of the Colorado River Basin.

The Commission's member States have always given strong support to water resource development and salinity control measures in the Colorado River Basin. We who are interested in water resources development in the Basin appreciate the opportunity to testify before this Subcommittee in support of the appropriation of funds to continue the construction and operation of the Colorado River Storage Project and participating projects and the features of both Titles I and II of the Colorado River Salinity Control Program in fiscal year 1993.

Representatives of each of the Commission's member States will submit detailed written testimony to this Subcommittee in support of specific appropriation requests that reflect the official position of each State with respect to the development of the water resource and salinity control projects and programs in the Upper Colorado River Basin, and the States' testimony is fully supported by the Commission.

Specifically, the Upper Colorado River Commission requests an appropriation of $42,404,700 million for the Bureau of Reclamation's regular construction program. Of that amount, $7,000,000 million is for the Animas-La Plata Project in Colorado and New Mexico, $15,068,700 million is for the Bonneville Unit of the Central Utah Project in Utah and $20,336,000 is for the Dolores Project in Colorado.

Project sponsors and parties to the Colorado Ute Indian Water Rights Settlement Agreement have asked that Secretary of the Interior Babbitt take a leadership role in developing a Memorandum of Agreement with the Environmental Protection Agency and the Army Corps of Engineers to expedite the construction of the Animas-La Plata Project, while at the same time completing all required environmental compliance. In addition to the Administration's $7,000,000 request for the Animas-La Plata Project, the Upper Colorado River Commission endorses supplemental appropriations for the project upon the execution of such an agreement.

Such supplemental appropriations are needed so that the Bureau of Reclamation can meet its construction commitments under the 1988 Settlement Act.

President's fiscal year 1994 budget request

[In thousand of dollars]

Project	
Animas-La Plata project	$7,000,000
Bonneville Unit (CUP)	15,068,700
Dolores project	20,336,000
Total	42,404,700

The Commission also requests funding in the fiscal year 1994 Budget for other activities associated with the Colorado River Storage Project and participating projects in the amount of $11,115,300 million and include:

President's fiscal year 1994 budget request

[In thousand of dollars]

Activity	
CRSP, drainage and minor construction: Dallas Creek project	310,000
CRSP & Public Law 102–575 preconstruction activity: Central Utah Project:	
Uintah Unit	685,700
Upalco Unit	389,600
Total	1,075,300
CRSP & Public Law 102–575:	
Section 8:	
Central Utah Project: Bonneville Unit	4,634,500
Dallas Creek project	1,375,000
Wayne N. Aspinall Unit	745,000
Strawberry Reservoir	605,000
Seekskadee National Wildlife Refuge	2,005,000
Utah reclamation mitigation account	5,000,000
Total	14,364,500

The above level of appropriations is needed to ensure that the full benefits from these projects will be attained in a timely manner.

In addition to the above-stated support for funding the Colorado River Storage Project and participating projects for fiscal year 1993, the Upper Colorado River Commission supports Bureau of Reclamation funding for development and implementation of the Colorado River Salinity Control Program described in Public Law 93–320, as amended.

The Colorado River Salinity Control Program, which authorizes both Title I and Title II projects, is designed to maintain salinity levels in the Colorado River system within established numeric criteria while the Basin States continue to develop their Compact-apportioned waters. This program is endorsed by the seven Colorado River Basin States and the Federal Government and is essential to the overall development and management of the Colorado River Basin. Specifically, the Commission requests an appropriation of $37.603 million for the Bureau of Reclamation's Title I Colorado River Basin salinity control program and $34,425 million for the Title II program. The funding levels supported by the Upper Colorado River Commission are consistent with the amounts requested by the Colorado River Basin Salinity Control Forum and are as follows:

Commission's fiscal year 1994 budget request

[In thousand of dollars]

Title I Construction	$11,133
Title I Operation and Maintenance	26,470
Total Title I Program	37,603
Title II Plan Formulation	1,300
Title II Construction:	
Grand Valley	17,000

Paradox Valley	4,100
Lower Gunnison Winter Water	4,100
Dolores Project (McElmo Creek)	6,300
Subtotal	31,500
Title II Operation and maintenance:	
Grand Valley	316
Paradox Valley	934
Lower Gunnison	375
Subtotal	1,625
Total Title II Program Funding	34,425
Total Title I and Title II Program	72,028

Further detailed statements regarding the specific funding for the salinity program will be presented in the testimony of the Executive Director of the Colorado River Basin Salinity Control Forum as well as by representatives of the Colorado River Basin States.

Through the requested appropriations, water resource and salinity control projects and programs within the Upper Colorado River Basin will be funded at a level that will benefit the local, regional and national economies.

Mr. Chairman, on behalf of the Upper Colorado River Commission, thank you for providing the Commission an opportunity to present this statement for the Subcommittee's consideration.

STATEMENT OF THE COLORADO RIVER BASIN SALINITY CONTROL FORUM

RECENT BACKGROUND—DETAILED FUND ALLOCATION

In 1984 the Congress acted to revise the Salinity Control Act and to establish a policy increasing the Basin States' cost-share to 30 percent of newly authorized salinity control works. This increase has made the Basin States even more attentive to the cost-effectiveness of the various components of the Colorado River Salinity Control Program.

Every three years, the Colorado River Basin Salinity Control Forum coordinates the views of involved federal agencies and the seven Basin states, and prepares the triennial review to EPA required under the Clean Water Act. The 1990 Review, Water Quality Standards for Salinity, Colorado River System, establishes a plan for salinity control in the Colorado River Basin that is in agreement with federal agencies' findings as to needs and recommended programs. These programs are required to maintain the state-adopted and EPA-approved water quality standard for the River.

With respect to construction, the Basin States urge the Congress to appropriate $17,000,000 for continuation of canal and lateral lining in the Grand Valley of Colorado; $4,100,000 for the continuation of the construction of facilities to dispose of salt brines in the Paradox Valley of Colorado; $4,100,000 for construction in the Lower Gunnison area of Colorado so that the winter stockwater supply can be placed in pipelines; and $6,300,000 for salinity control features of the Dolores Project in southwestern Colorado.

For plan formulation, the Forum supports an appropriation of $1,300,000. These funds should be used (1) for further analysis of salinity control opportunities at several locations including the Price-San Rafael Unit (Utah), the San Juan Unit (New Mexico), and the Glenwood-Dotsero Unit (Colorado), (2) to examine the cost-effectiveness of the overall program, and (3) to search for opportunities to remove additional salts from nonpoint sources.

It is noted that in the past, funds have been requested by Reclamation in the portions of their budget related to operation and maintenance and general administrative expenses. The Forum supports funding levels that will ensure adequate operation and maintenance of constructed salinity facilities.

JUSTIFICATION

The waters of the Colorado River system serve some 18 million people and irrigate approximately 2.5 million acres in the seven Colorado River Basin States. The River also provides domestic and irrigation water to Mexico. Salinity has long been recognized as one of the major problems in the River. Water users in the lower reaches of the River system have suffered significant adverse impacts due to the River's salinity. These impacts have been estimated to exceed $300 million a year. Without salinity control measures and with increased demands for Colorado River water in the Basin, the River's salinity is projected to significantly increase by the turn of the century, with concomitant increases in salinity damages.

The Basin States' concern with the River's increasing salinity led to the creation of the Colorado River Basin Salinity Control Forum in 1973. The Forum, whose members are appointed by the governors of the respective states, developed a salinity control policy that called for maintaining salinity concentrations at or below those levels found in the lower River in 1972, while the Basin States continue to develop their compact-apportioned waters. The Forum has a continuing responsibility to see that a salinity control plan is implemented to meet the policy objectives.

After discussions between the federal government, the Republic of Mexico and the seven Colorado River Basin States, the Congress enacted in 1974 the Forum-sponsored Colorado River Basin Salinity Control Act (Public Law 93–320). Title I of the Act established a program to reduce the concentration of salts in the Colorado River below Imperial Dam (the last diversion point in the United States) for waters being delivered to Mexico. Title I was identified by Congress as a federal commitment. The Act established a companion program, Title II, which directed the states and the federal government to work together to prevent salinity increases in the Colorado River above Imperial Dam, benefitting users in the United States as well as Mexico. The 1974 Act also created a Colorado River Basin Salinity Control Advisory Council, composed of gubernatorial representatives of the Basin States to advise the Secretaries of the Interior and Agriculture and the Administrator of the Environmental Protection Agency as to needed annual adjustments to the salinity control effort.

If an appropriate level of funding is not provided in fiscal year 1994 and in future fiscal years for the Colorado River Salinity Control Program, the probability of exceeding the numeric criteria set forth in the water quality standard for salinity is greatly increased. To cut funding below what is requested would result in significant additional economic damages due to high salinity levels, both in the United States and Mexico.

In 1984, Congress enacted much-needed amendments to the 1974 Act. The amendments (Public Law 98–569) authorized additional activities for the Departments of the Interior and Agriculture that were needed in order to meet the objectives of the Act. Previously the Congress had required the Basin States to reimburse, over a period of time, the Bureau of Reclamation expenditures in the amount of 25 percent of the total construction costs. The 1984 amendments by Congress require that for newly authorized construction the Basin States shall pay 30 percent of the construction costs upon expenditure, or alternatively over time with interest.

Since the enactment of the 1984 amendments, the Basin States and all involved federal agencies have worked diligently to formulate a program minimizing the cost of controlling the salinity of the Colorado River. These cooperative study efforts have shown that the salinity of the River can be controlled to meet the objectives of the Act, as amended, with a funding level significantly less than that initially identified.

In summary, we urge that the Senate Committee on Appropriations, Subcommittee on Energy and Water Development, recommend $32,800,000 be appropriated in fiscal year 1994. It is important to note that reductions in these appropriations will delay implementation of the Salinity Control Program and will lead to increased economic damages to the users of the Colorado River in the United States and Mexico. Catch-up funding attempts in future fiscal years will result in a program that will ultimately cost more.

YUMA DESALINATION PLANT

In addition, the Colorado River Basin Salinity Control Forum recognizes that the federal government has made significant commitments to the Republic of Mexico and to the Colorado River Basin States with regard to the delivery of quality water to Mexico. In order for those commitments to be honored, it is most important that in fiscal year 1994 and in future fiscal years, the Congress provide funds to the Bureau of Reclamation for the operation and maintenance of the Yuma Desalination Plant.

STATEMENT OF WYOMING STATE ENGINEER'S OFFICE

SUMMARY

This letter requests fiscal year 1994 funding in the amount of $32,800,000 for the Bureau of Reclamation for the Colorado River Basin Salinity Control Program Control Program:

Construction	$31,500,000
Plan Formulation	1,300.000
Total	32,800,000

Dear Senator Johnston, I am writing in support of a fiscal year 1994 appropriation of $32,800,000 for the Bureau of Reclamation's Colorado River Salinity Control Program. You recently received testimony from the Colorado River Basin Salinity Control Forum (Forum) submitted by the Forum's Executive Director, Jack Barnett. The State of Wyoming concurs in the fiscal year 1994 funding request and justification for that funding level set forth in the Forum's testimony.

In addition to being the Wyoming State Engineer, I represent the State of Wyoming on the Forum and the Colorado River Basin Salinity Control Advisory Council (Council). As you know, the Council was created by the 1974 Colorado River Basin Salinity Control Act, Public Law 93–320. Like the Forum, the Council is composed of gubernatorial representatives of the seven Colorado River Basin states and serves an important liaison role between the seven states and the Secretaries of the Interior and Agriculture and the Administrator of the Environmental Protection Agency (EPA). The Council is directed by statute to advise these federal officials on the progress of the federal/state cost-shared, basin-wide salinity control program, and annually makes funding recommendations, including the amount believed necessary to be expended by the Bureau of Reclamation for control of salinity in the Colorado River Basin.

The Council, in its 1992 Annual Report, recommended that $32,800,000 be appropriated to the Bureau of Reclamation for its Colorado River Basin Salinity Control Program activities. The Forum's testimony is supportive of the total appropriation request and provides the detailed fund allocation contained within the Council's recommendations. In addition to the construction and plan formulation funding level supported by the Forum's testimony and this testimony on behalf of the State of Wyoming, funding requests have been made by the Bureau of Reclamation related to the Colorado River salinity control effort for operation and maintenance and general administrative expense. The Forum's testimony noted the importance of adequate funding for the operation and maintenance of constructed salinity control facilities that are in place helping to ensure that the State-adopted and EPA-approved water quality numeric criteria are not exceeded, and to support the conduct of necessary coordination and technical support activities in furtherance of the basin-wide salinity control program.

If the appropriate level of funding is not provided for the Colorado River Salinity Control Program, there is an increased probability that the numeric criteria set in the water quality standards for the Colorado River might be exceeded. Delaying or deferring adequate funding for the Program at this time will create the need for a much more expensive salinity control effort in the future to assure that this nation meets its water quality commitments to the Republic of Mexico. Catch-up funding in future fiscal years will cost much more money, increase the likelihood that the numeric criteria for Colorado River water quality are exceeded, and create undue burdens and difficulties for one of the most successful Federal/State cooperative nonpoint source pollution control programs in the United States.

Finally, we in Wyoming concur with the seven-state Forum's testimony urging the Congress to provide adequate funding for and direction to the Bureau of Reclamation to operate the Yuma Desalting Plant. One of the key measures authorized in Title I of the 1974 Colorado River Basin Salinity Control Act, the Yuma Desalting Plant has been completed and the United States is in now in a position to meet its commitment to the Colorado River Basin States that Compact-apportioned Colorado River water would not be used to allow this Nation to meet its water quality commitment to the Republic of Mexico. So long as the Yuma Desalting Plant is not being operated, that commitment continues to not be met.

I wish to thank you for the opportunity to submit this letter, and would request, in addition to your consideration of its contents, that you make it a part of the formal hearing record concerning fiscal year 1994 appropriations for the Bureau of Reclamation. In accordance with the Subcommittee's direction, I have submitted five copies of this letter.

STATEMENT OF THE PYRAMID LAKE PAIUTE TRIBAL COUNCIL

This appropriation request seeks funding to implement provisions of Public Law 101–618, which was signed into law November 29, 1990. The Pyramid Lake Paiute Tribe is a party to this Act. Public Law 101–618 is a water settlement act which will have a major impact on the future of the Tribe. Funding is being sought to implement provisions of the Act. The total sum requested is $3,767,979, but $1,500,000 would not count as a budget outlay. The Bureau of Indian Affairs is the agency responsible for distribution of these funds.

FISHERIES FUNDING

Public Law 101–618 consists of 10 sections, whose time frame for enactment range from 1 to 5 years. Section 208 establishes a 25-million dollar trust account to fund the operation of the Tribal fish hatcheries. This fund was established during fiscal year 1992 and the Tribe thanks Congress for enacting this part of the legislation. However, some details regarding the creation of this fund need to be resolved. Specifically, Section 208 (a–2–B) of the law states the value of the fund's principal is to be maintained at a value of 25 million dollars based on 1990 constant dollars. This being the case, a total of 26.5 million dollars should have been appropriated in 1992. This is based on the fact that inflation during 1991 was 4.2 percent and inflation during 1992 was 3.0 percent. The fund was established during 1992, with half of the trust fund being created at the beginning of fiscal year 1992 and the other at the very end of fiscal year 1992. The 26.5 million dollar values applies one half of 1992's 3 percent rate of inflation and the full 4.2 percent rate for 1991.

This appropriation seeks $1,500,000 to keep the principal adjusted for the effects of inflation for 1991 and half of 1992. This appropriation would only increase the principal of the Trust Fund and could not be spent. Technically, this would not constitute an outlay for budget purposes. This is based on the fact that the Tribe cannot spend the principal in the fund, only the interest earned on the principal. The fund's principal must remain intact in the U.S. Treasury.

The Tribe would also like Congress to appropriate $767,979 to the interest account in the fisheries fund. The basis for this request is to offset the effects of the time delay which occurred in establishing the fisheries fund. As stated earlier, half the fund was created at the beginning of fiscal year 1992 and the balance was created at the end of fiscal year 1992. This split resulted in both lost interest and a declining interest rate environment. Long term rates had fallen over 100 basis points by the time the entire fund was established. This decrease in the earning power of the fund will be felt for years. Without these adjustments, the Tribe's fisheries fund will be starting with less money than Congress contemplated when Public Law 101–618 was enacted. In closing on this issue, we thank the Congress for its foresight in establishing the Tribe's fisheries fund and trust you will find this an equitable end to this issue.

SETTLEMENT IMPLEMENTATION

The second request is for funding technical services to assure the Tribe is fairly represented through the settlement process and to allow the Tribe to prepare the plans that are required by the Settlement Act. Final enactment of Public Law 101–618 requires a complex River flow operating agreement be reached between the Tribe, the State of Nevada, the state of California, the Federal government, and other interested parties. Agreements must also be reached on the issues of water meters, water conservation, and a recoupment plan to recover water illegally diverted from the Truckee River. These arguments are being reached through a series of negotiating sessions. A lot is at stake in these negotiations. The States are well represented by legal and technical experts. The tribe's technical team consists of a single attorney and a hydrologist. In the past, the BIA has provided funds for these services, and the Tribe is grateful. This last year Congress appropriated $350,000 requested by the Tribe for which the Tribe is grateful as well. However, the additional funds Congress provided for settlement implementation were supposed to supplement funds the Tribe has been receiving through the BIA's regular programs for water resources and attorney's fees. Congress recognized that the BIA funds were not sufficient. But when Congress appropriated the supplemental funds, the BIA responded by severely reducing or even eliminating the funding that the Tribe had been receiving through its other programs. In order to meet the demands of this next year, the Tribe is seeking additional funding for its technical team, in the amount of $240,000.

Typically, the Tribe provides $240,000 of its own funds to cover the costs of litigation support. By assuming this financial burden in the past, the Tribe has learned to watch expenditures closely and select a technical team that is highly credible and does not waste time getting results. If Congress appropriates litigation support funds at $240,000, the Tribe will not have this financial burden. These funds should be placed in a BIA 638 Self-Determination contract for the Pyramid Lake Tribe. The $240,000, if provided, should not affect existing BIA programs.

The sum of $260,000 would go toward the services of a tribal economic development planning staff. Section 208 of the Statute creates a Trust account to serve as an economic development fund for the Tribe. The Tribe must prepare and adopt an economic development plan in consultation with the Secretary of the Interior before any of these funds can be released. Funds from this account would not be available until 1996. This is only a few years away, so now is the time to start the planning process.

This trust account is the Tribe's only real opportunity to become economically self-sufficient. The tribal membership seeks job opportunities, but they do not want a mad rush for development upon release of funds. The Tribe seeks lasting opportunities for its people. Now is the time to begin the planning process, so the entire Tribal membership will be allowed to participate. In summary, the Tribe is asking for $240,000 for legal fees, and $260,000 for development of an Economic Plan, totalling $500,000.

In closing, the Tribe is thankful for the funding Congress has provided to the Tribe to support the settlement implementation process. The Tribe is counting on Congress to continue funding the Tribe's representation in Settlement negotiations during fiscal year 1994. If these funds are not received, the Tribe will have to re-evaluate its involvement in aspects of the settlement process and cutback significantly on implementation efforts that have already begun.

RECOVERY PLAN IMPLEMENTATION

Section 207 of the statute directs the Secretary to revise, update, and implement plans for the conservation and recovery of the cui-ui, pursuant to the Endangered Species Act, as amended. The U.S. Fish and Wildlife Service established a recovery team for the endangered cui-ui in 1989. The teams' final plan was signed by the Regional Director of the Fish and Wildlife Service in May 1992. Implementation of the plan should begin immediately, now that the plan is final. The Recovery Plan identified that recovery of the cui-ui will require increased water inflows to Pyramid Lake. The plan states that an equivalent of 110,000 acre feet of additional annual flow to Pyramid Lake is required to de-list the cui-ui. The implementation schedule of the recovery plan included water rights purchases. The plan stressed the need to begin the purchase program as soon as possible. If funds are not provided in FY–94 there will be a significant delay. The plan identified the need for prompt action. Delays in implementing the plan will necessitate a higher level of water purchases than would be required if action were immediate. The value of water rights is also increasing, which will drive the ultimate cost of the purchase program even higher.

The Tribe, through BIA–638, is requesting $1,000,000 for its Tribal Water Resources Department to begin implementation in 1993. This amount of money is a modest starting point. It is less than the $1.2 million that Congress appropriated in 1988 for the Stillwater Wildlife Management Area's water rights purchases. The intent is to develop the mechanics of an acquisition program. Firm market data will be obtained to begin the implementation process. This will include the number of willing sellers, acreage available, value of water rights, and the transfer process. Lands that will yield the greatest quantity of water for Pyramid Lake and that will improve the water quality in the Truckee River by reducing non-point source loading will be sought. The Tribe will assure these purchases will not compete with existing Federal water purchase programs for the Stillwater Wildlife Management Area.

SUMMARY OF APPROPRIATIONS REQUEST

Project/description	Budget request
Fisheries funding:	
Establish the value of the $1,500,000 Fisheries Trust Fund's Principal Account to the inflation indexed level identified in Public Law 101–618	$1,500,000
Provide funds for interest earnings lost due to the time of creating the Trust Fund	767,979
Settlement implementation:	
Legal fees, $240,000	500,000

SUMMARY OF APPROPRIATIONS REQUEST—Continued

Project/description	Budget request
Tribal planning, $260,000	
Implementation of the cui-ui Recovery Plan: Acquire water rights to begin recovery actions for the cui-ui population	$1,000,000

ANIMAS-LA PLATA PROJECT—OPPOSITION

STATEMENT OF TOMMY BOLACK, FARMINGTON, NM

Dear Mr. Chairman, I, Tommy Bolack, am co-owner and operator of the B Square Ranch located south of Farmington, New Mexico in San Juan County. The ranch comprises over 12,000 acres, with nearly a thousand under cultivation. It is home to numerous wildlife species. It provides a wintering ground for over 60,000 waterfowl along with Bald and Golden Eagles. Other occasionals include pelicans, trumpeter swans, herons and the like.

Although the operation is located along five miles of the San Juan River, a large portion of the water comes from the Animas River via the Farmington-Echo Ditch. This water provides irrigation for over 200 acres of farmland and supplies some seven lakes with a total surface area exceeding 100 acres. This water also maintains around 500 acres of "Bosgue", or wooded area, providing habitat for everything from quail to mule deer.

This operation strives to support public awareness and to promote stewardship of our natural resources by demonstration. This statement will address some of my concerns should the A-LP be built as presently proposed.

As chairman of the Farmington-Echo Ditch board of directors, I am concerned on the availability of water. This is one of the last diversions on the Animas River prior to its confluence with the San Juan River. Many previous years have seen a struggle to divert enough water, particularly during August, to supply the needs of our shareholders, as the river is then nearly dry.

Any decrease in Animas River flows during the months of July–September could have adverse effects upon users in our ditch system by the loss of crops or a reduction in irrigable farmland.

In order to maintain the lakes and woodland habitat, the B Square Ranch utilizes, year around, water that is junior to the Animas-La Plata Project. This priority being early 1960s, and raising a question as to the future availability of this right. Should it be denied, the negative impact to wildlife could be significant. Finding water with a higher priority would involve the removing of productive farmland.

Another concern of mine is in the quality of water that will be available. As the river flows are decreased, so too will be the surface return flows. This will most certainly reduce the dilution factor and increase the concentration of minerals and chemicals carried by subsurface flows into the river. This could seriously limit the uses for such water and impact both agricultural and municipal users.

As a conservationist, I am concerned over the tremendous amount of energy that will be required to pump A-LP water. With our present hydro-electric sources being curtailed by "natural flow programs," I am concerned as to where this energy will come from. Calling upon fossil fuel plants will adversely affect the environment and pulling away allocations from electric utilities will have far-reaching negative impacts for all customers.

To save this energy, we should look at gravity alternatives. Hermosa or Lime Creek tributaries could be dammed to catch most all runoff, with this reservoir used to meet A-LP needs. This should also have minimal effects upon the balance of the Animas River system.

(From the High Country News, Mar. 22, 1993)

ANIMAS-LA PLATA: LAST BIG DAM IN THE WEST

by Steve Hinchman

DURANGO, Colo. — The late 1980s were bitter years for the West's water establishment, as giant and once-invincible water projects dropped like flies.

In the last five years, Colorado's Two Forks Dam, North Dakota's Garrison Project, Cliff Dam in Arizona, and the Central Utah Project, to name a few, were all either killed, changed beyond recognition, or indefinitely delayed.

Only the $640 million Animas-La Plata project in southwestern Colorado sailed on. While often criticized as an extravagant and hopelessly complicated Rube Goldberg scheme, Animas-La Plata is the one surviving big-ticket item in the Bureau of Reclamation's construction budget. Chances are, it will be the last of the West's great federal water projects.

Animas-La Plata is not a made-in-Washington, D.C., project or even a widely supported Colorado project. Its roots are in Durango, where backers seem impervious to the water reformation around them. Here, 400 miles from Denver and Two Forks, and isolated behind the San Juan Mountains, Animas-La Plata is considered a done deal.

This scrappy mountain town, set in the steeply walled Animas River valley, has always believed that its future depended on whether it could wet the arid mesas of the surrounding countryside and develop the Indian reservations and coal fields farther south. Loyalty to Animas is a prerequisite for public life in Durango, and pursuit of the project has dominated regional politics for three decades.

As Sam Maynes, Durango's legendary water attorney and the brains behind the Animas-La Plata project, said in a recent telephone interview, "I have never known an elected official in Colorado that has been opposed to the Animas-La Plata project, either in local, state or federal office."

Politicians were reacting to nearly unanimous local support, but not all that support was freely given. Durango has a long and sometimes black history of strong arming project opponents: Local critics have been shouted out of public meetings, harassed at work, and discredited in the press. Now the town has grown too large and diverse for those tactics. But local support for what would be the most expensive federal water project ever built in Colorado is still exhorted on the basis of regional patriotism and self interest.

"Why support the Animas-La Plata project?" read one political advertisement during a 1987 campaign to ratify the project's repayment contract. "Because someone else is paying most of the tab. We get the water. We get the reservoir. They pay the bill."

The result is one of the largest and most cohesive coalitions that has ever put its shoulder to a Western waterwheel. The coalition includes half a dozen local Colorado and New Mexico water conservancy districts; the cities of Durango, Colo., and Farmington, Aztec and Bloomfield, N.M.; numerous counties; the governors of both states; three Indian tribes; and the entire congressional delegations of Colorado and New Mexico.

The coalition has already built several small BuRec projects — on the Mancos, Piedra, Florida and Pine rivers — and, in the 1980s, pulled off the $570 million Dolores project, which was once on President Carter's famous "hit list."

The crowning project is to be Animas-La Plata, which Maynes calls "the granddaddy of them all." It will supply water for the cities and their new suburban developments; create a recreation reservoir outside Durango; allow development of the area's substantial coal reserves; and irrigate 68,000 acres.

An Indian project

The project also has a racial and cultural dimension that makes it very attractive to the U.S. Congress and to non-Westerners. Thanks to the 1988 Ute Indian Water Rights Settlement Act, Animas-La Plata settles a dispute that could damage and racially divide the Four Corners area. In 1972, the Southern Ute and Ute Mountain Ute tribes filed suit in state court for water rights that date back to 1868, the year their reservations were created. The filing would have given the tribes senior water rights on virtually every river and stream south of the San Juan Mountains, says Southern Ute water lawyer Scott McElroy.

A clash between the then Anglo ALP coalition and the tribes would have doomed the project, and put a cloud over the existing economy and way of life. Fred Kroeger, chairman of the Southwestern Water Conservancy District, says such litigation would cost hundreds of millions of dollars and leave everyone's water rights in limbo for 15 to 20 years.

Instead of litigating, the two sides negotiated. The tribes gave up their claim to senior rights in return for, among other things, $60 million in development funds, a domestic water pipeline from the Dolores project, and a one-third share of the Animas-La Plata project, then set for a 1990 construction start.

As a bonus, the coalition got two tribal members who have tremendous influence with Congress, the courts and the public. Although two-thirds of project water will go to cities, coal companies and non-Indian farmers, the settlement agreement turned ALP into an "Indian project."

That makes ALP far trickier to oppose than a normal water project. There has always been intense local opposition — opposition that was all the more determined because of the tactics used against it. But since passage of the act, the few non-local environmental groups involved have handled ALP with kid gloves.

The act also created a deadline. If Phase I of the project isn't complete by Jan. 1, 2000, the tribes can ask the courts to void the settlement act. The year 2000 deadline let the Reagan and Bush administrations put the project off, but the new Clinton administration can't. It must decide whether to build Animas-La Plata, and soon.

No bigots

For the West, ALP's union of Native American tribes and old-time water developers is an unlikely alliance. Usually, Anglos, with the help of BuRec and the Army Corps of Engineers, have stolen Indian water. When the Indians seek to get it back, they often win empty legal battles.

For example, in 1990 the Arapahoe and Shoshone tribes won over half the water in Wyoming's Wind River Valley. However, the 20-year, multi-million-dollar court battle led to such enmity between non-Indian farmers and the Indians, and so roused Wyoming, that the tribes have never been able to turn that paper water right into wet water. They haven't even been able to leave their water in the river to create a tribal fishery.

Sam Maynes and Southern Ute tribal chairman Leonard Burch — who have worked together on Animas-La Plata since the mid-1960s — say they have striven to avoid that kind of race war.

"We don't have a bunch of rednecked bigots down here against the Indians," says Maynes, who also serves as general counsel for the Southern Ute tribe. "We have worked together with the Indians and have (a project) we all can be proud of."

The partnership has led to a cooperative atmosphere between tribal and local governments in southwestern Colorado, and eliminated much of the racial tension that plagues other Western reservations.

However, Maynes is accused of exaggerating the tribes' benefits in order to keep Animas-La Plata afloat. The affable, gray-bearded attorney has spent 30 years pushing ALP, and along the way became the undisputed king of southwestern Colorado water politics. Today, Maynes is water lawyer for the Southwestern Water Conservancy District, the Animas-La Plata Water Conservation District and five other subdistricts, and also represents the Southern Ute tribe, La Plata Electric and, at times, Pittsburg and Midway Coal Co., which owns extensive water rights in ALP's main reservoir.

He also owns the Durango office building that houses his law firm, the BuRec field office, and the Southwestern and Animas-La Plata water conservancy districts. Project opponents often criticize Maynes for conflict of interest and for leading the tribes astray, but those charges have never stuck.

Instead, Maynes' leadership and influence have kept the ALP coalition together through setbacks that would have killed other, arguably better, projects. For example, a major crisis occurred when the Reagan administration balked at ALP's steeply rising price tag and ordered project backers to help pay for the project. The coalition performed triage on the plans, put up some money, and kept ALP alive.

First, each member, except for the tribes, came up with some money, totalling about $70 million. To meet the rest of their obligations, the coalition split the project in two. The $463 million Phase I, or the bulk of the project, would be federally funded, with the help of the local contributions. The $154 million Phase II, the most marginal part of the project and the easiest to give up, would be funded entirely by local interests if it is ever built.

As best it could, the coalition shared the pain. Because the Ute Mountain Utes and Southern Utes had most of their water delivery structures in Phase II, the agreement gives the tribes ownership of water stored in Phase I, even if that makes less water available to non-Indian farmers.

The discovery of two endangered fish species downstream of the project created a second crisis. The Bureau would have ignored the fish, but a letter from the Sierra Club Legal Defense Fund forced the agency to invoke the Endangered Species

Act. That ultimately led to a U.S. Fish and Wildlife Service ruling that Animas-La Plata could not be built.

The ALP coalition acted swiftly, putting together a complicated recovery plan for the fish. With the help of then Interior Secretary Manuel Lujan and the Colorado and New Mexico congressional delegations, the coalition bullied the U.S. Fish and Wildlife Service into delaying its ruling until a seven-year study could be conducted.

In addition, the Bureau of Reclamation promised to provide 300,000 acre-feet of water a year from the Navajo Irrigation Project to replace any water lost to Animas-La Plata during the study period, and, potentially, forever. Finally, the coalition agreed to put off building half of Phase I until after the seven-year study. Then, if Fish and Wildlife approved, the rest of the project would be completed.

Enduring, but unbuilt

In short, the half-century-long effort to build Animas-La Plata ranks among the most enduring and well-led political movements in the history of Western water.

That's why Sam Maynes, Leonard Burch and company are stunned to find that Animas-La Plata is suddenly in deep trouble, and may never get built.

While there has always been local opposition to ALP, national environmental groups generally stayed out of the fight. As a result, no one has ever mounted a serious challenge to the project.

The late 1980s changed that. The EPA veto of Two Forks Dam — based in part on environmentalists' arguments that the massive dam wasn't needed — broke a barrier that had kept the environmental community out of major water policy decisions in Colorado.

And when the Sierra Club Legal Defense Fund intervened in Animas-La Plata on behalf of the endangered Colorado squawfish, it and other environmental groups realized that ALP was not impregnable.

Under cover of its Indian blanket, says Legal Defense Fund lawyer Drew Caputo, Animas-La Plata is a disaster. In fact, Caputo and co-counsel Lori Potter found so many problems that they say challenging the project is a turkey shoot.

Since 1990, the Legal Defense Fund has twice stopped the long-awaited groundbreaking on Animas-La Plata with legal actions. In 1992 Caputo and Potter filed four lawsuits against the Bureau and emerged with four victories, proving that the Bureau had violated at least five separate federal laws trying to push the massive $640 million project through. Cases included violations of the Clean Water Act, the Freedom of Information Act, the Endangered Species Act, the Administrative Procedures Act and the National Environmental Policy Act.

"They break the law and we catch them," says Caputo. "Animas-La Plata makes no economic or environmental sense, and the only way the Bureau will be able to move forward is to keep trying to break the law."

As a result of the lawsuits, it may be years before project sponsors or the Bureau can do the engineering, economic and scientific studies to put the project on a firm foundation.

Thus far, the Bureau has not found bedrock. For example, in court last year the Bureau agreed to update its 1980 final environmental impact statement on ALP. But the draft supplemental EIS released last October was so bad that the Environmental Protection Agency flunked the document and warned that unless the Bureau rewrote the EIS yet again, it would consider the agency in violation of the National Environmental Policy and Clean Water acts.

Caputo didn't wait for the Bureau to respond: He immediately gave the agency 60-day notice of intent to sue if it proceeded with construction of any aspect of the project.

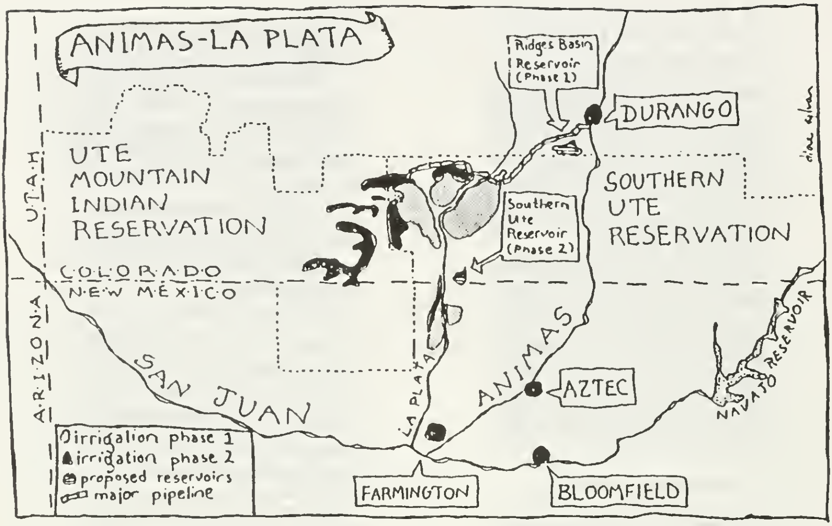
In addition to a sue, sue, sue approach, the environmental groups are trying to take the offensive by putting an alternative to ALP on the table, just as the critics of Two Forks Dam did. To give their alternative credibility, the Sierra Club Legal Defense Fund and its clients — nine state and national environmental groups — hired one of Colorado's most respected engineers, former State Water Engineer Jeris Danielson, as a consultant.

Caputo argues that ALP will never get built unless it is scaled back. "The Bureau has two choices," Caputo and Potter wrote last fall in a letter to the *Durango Herald*. "It can either keep trying to bull ahead illegally with Animas-La Plata, in which case we will continue to sue them and beat them in court. Or it can recognize that Animas-La Plata is an illegal turkey that cannot and should not be built, and begin to look seriously at cheaper, environmentally friendly alternative ways of meeting the real human needs in the Four Corners area."

Dump the Bureau of Reclamation

The ALP coalition, however, is undaunted. Maynes calls Caputo's threat "braggadocio." He says the lawsuits are procedural issues that can be easily fixed.

Maynes also laughs at the offer to negotiate. "We don't have to deal with the Sierra Club. We have to deal with the National Environmental Policy Act and the Endangered Species Act."



Despite his poise, Maynes is clearly furious that the project can be so easily held up this late in the game. The blame, he says, lies with the Bureau of Reclamation.

"At various times in the last 10 years, people within the Bureau of Reclamation never thought we would be able to get the project built," says Maynes. "As a result, they didn't do their homework."

Maynes says key studies on soil toxicity were required in 1986, but never done. The Bureau also failed to do surveys and dozens of other research items required by several federal laws.

To the dismay of local supporters, those mistakes have made Animas-La Plata an easy target for what Maynes calls "slam dunk" lawsuits by the Sierra Club Legal Defense Fund. Even the *Durango Herald* lashed out, warning that "if BuRec's handling of the Animas-La Plata project is any indication of its competence, the agency should be one of the first agencies targeted for elimination under the Clinton administration."

The Bureau, Maynes concludes, can't fix the problems and should be dumped. The coalition should build Animas-La Plata itself, as Utah water officials did when they took over the failing Central Utah Project. Or, he adds, the tribes could take over responsibility for construction under the Indian Self Determination Act.

A project that makes a Rube Goldberg machine look elegant

Blaming the Bureau is clever but "disingenuous," says Jim Decker, a political science professor at Fort Lewis College in Durango and a founding member of TAR, Taxpayers for the Animas River. The small Durango group has fought an almost solo war against Animas-La Plata since 1979.

The Bureau of Reclamation is just an engineering firm, says Decker, and does exactly what local proponents tell it. He says the fatal flaw is the project itself.

Decker, who can recite a litany of problems, always starts with the economics. ALP, he says, has been a financial loser since it was authorized in 1968. Its first incarnation — a high-altitude storage dam and a 48-mile-long system of canals, siphons and tunnels — would have cost $110 million, and had a benefit-cost ratio that even by the Bureau of Reclamation's generous calculations only rated .97 to 1.

In the mid-1970s, the Bureau and the Southwestern Water Conservancy District convened a series of meetings in Durango to make ALP more economic. Their solution, and the current plan, was an off-stream reservoir in Ridges Basin, a broad, scooped-out valley just southwest of and 500 feet above Durango.

The system requires three pumping stations. The first two stages will lift 195,000 acre-feet of Animas River water the 500 feet to Ridges Basin Reservoir, and then another 400 feet up and over the ridgeline to the farmlands of the La Plata basin. There, a final set of pumps will pressurize the system for sprinkler irrigation, with long pipes spreading across the basin's high, windswept mesas.

That solution created new problems back in Durango. Ridges Basin Reservoir is downstream of town and on the wrong side of the valley, so the agency will have to build another set of pipes and pumps to get the town's share of water into its municipal reservoir.

That's not all. There is another reservoir and pumping station on the lower La Plata River to help the Southern Utes develop their coal reserves; and elaborate plans for water exhanges that allow Farmington, Aztec and Bloomfield, N.M., to draw water from the project.

The sprawling collection of pipes, pumps and reservoirs, says Decker, is possibly one of the most inefficient BuRec projects ever designed.

Many agree. "We are buying a project that will make Rube Goldberg look like he did his training at MIT. It will make Reddy Kilowatt do cartwheels in celebration of all the electricity this project will consume," said Rep. George Miller, D-Calif., the current head of the House Interior Committee, in a 1988 speech on the House floor.

The new design is worse, not better, than the original plan, say opponents. Testimony from a recent BuRec report to the Office of Management and Budget — released because of a Sierra Club Legal Defense Fund Freedom of Information Act lawsuit — shows that costs have risen to $640 million, while benefits have dropped to 60 cents for every dollar invested. Project opponents warn, given the delays and the Bureau's history of underestimating project costs, that the final price tag will likely exceed $1 billion.

Once in operation, it will take over 160 million kilowatt-hours of electricity a year to keep the pumps running. In testimony to OMB, the Bureau said that rising power costs — which will account for 41 to 46 percent of operation and maintenance costs — could make ALP so expensive that the federal government would have to subsidize its annual operations, or shut it down.

The problems go on. The federal subsidy to irrigation lands exceeds $7,000 an acre, making it one of the most expensive agricultural projects in U.S. history. And because most of the land sits at 7,000 feet, the short growing season will limit farmers to growing alfalfa, which is already plentiful in the Four Corners region.

"However you slice it, it's an economically senseless project," says Drew Caputo, "particularly in a time of huge federal deficits and a stubborn recession."

Buoyed by recent successes, the growing opposition movement is pinpointing other problems as fast as it can. ALP, they say, would cause terrible water quality and salinity problems in both the Animas and La Plata rivers; destroy a $3 million rafting industry based in Durango; steal water from New Mexico farmers who live downstream on the Animas River; dewater hundreds of acres of wetlands; and eliminate the last viable winter range for Durango's famous elk herds. Finally, there are unanswered questions about the endangered fish living in the San Juan River downstream of the project.

The allegations are raising eyebrows around the region, and may have led New Mexico Rep. Bill Richardson, D, to hedge his backing of ALP.

"I have been supportive of it, but I am alarmed by the growing opposition of my constituents," Richardson recently told the *Farmington Daily Times*. "One of the main issues will be if we can afford it."

The reports also worry New Jersey Sen. Bill Bradley, D, chairman of the Senate subcommittee on water and power, who recently asked the General Accounting Office to reinvestigate the project.

To split the coalition

Nevertheless, opponents concede they may never have the political strength to kill Animas-La Plata. In fact, counter pressure is mounting to get the project back on track. The politics have narrowed to one issue: the Ute Indian water treaty. To take that message to Washington, project supporters have a perfect ally in newly elected Sen. Ben Nighthorse Campbell, D-Colo., who is Northern Cheyenne but makes his home in Ignacio, the capital of the Southern Ute reservation.

Campbell, who strongly backed the project while in the House, has acted quickly, spearheading an effort last month along with Sen. Hank Brown, R-Colo., and Rep. Scott McInnis, R-Colo., to stymie the GAO investigation. Campbell says the Sierra Club Legal Defense Fund offer to find viable alternatives to Animas-La Plata is an attempt to delay the project until it collapses from rising costs.

"If Animas-La Plata doesn't get built," Campbell says, "it will be just one of a series of treaties that the federal government has made with Indians and systematically broken because of special interests. They just oppose the Indians getting fair treatment."

Campbell and the ALP coalition argue that the 1988 Ute Indian Water Rights Settlement Act is just as important — socially and legally — as the federal environmental laws.

"I am surprised that the Southern Ute Tribe hasn't ordered its attorneys to figure out how to sue the Sierra Club for violating their civil rights," says Maynes. "They are causing the Indians great damage by delaying the project."

But project opponents, including many tribal members, are not backing off. Instead, they have taken a page out of Sam Maynes' book. Once a rag-tag group of maybe a dozen volunteer activists, TAR has created a coalition of regional groups fighting various aspects of the project.

The Four Corners Action Coalition includes rafters, farmers, landowners along the Animas River, Southern Ute tribal members, environmentalists and many others. At a January meeting at a tiny schoolhouse on the Animas River in New Mexico, more than 30 showed up to plan the coming fight.

Local opponents also established new links with the Sierra Club Legal Defense Fund and several other national groups. Together they hired former Colorado water engineer Jeris Danielson, a move calculated to split the ALP coalition, activists say.

"My clients are fully committed to meeting the Indians' and non-Indian needs," says Caputo. "We are trying to come up with a settlement that requires neither Animas-La Plata nor further litigation."

Caputo adds that preliminary analysis by Danielson shows there are many options for the area that don't require spending hundreds of millions on Animas-La Plata. Some ideas are:

- Provide more water to the Ute Mountain Ute reservation from the Dolores project,
- Supply new water to both the Ute Mountain and Southern Utes — as well as a recreation lake — by building a small dam on the Mancos or La Plata rivers,
- Expand Durango's water supply by using excess capacity available from the nearby Florida project, and
- Make existing water go further by lining irrigation ditches, initiating an urban water conservation program in Durango, and buying out willing sellers of water rights.

The pressure seems to be hitting home in Durango. John Brown, the manager of the Animas-La Plata and Southwestern Water Conservancy districts, resigned in January, saying that with several years of delays coming his services were no longer needed.

Likewise, the city of Durango, in the midst of a population boom, has ordered its engineers to evaluate building a water project on the Animas River. City Manager Robert Ledger explains that while the city has always supported ALP, he doubts its problems will ever be worked out, let alone in time to meet the city's growing needs.

"For $7 to $10 million we could (build our own project) and be over with it," Ledger says. "Frankly, that's starting to look a lot more attractive."

The Southern Utes

So far the Indian tribes are ignoring the new environmental coalition. Southern Ute Chairman Leonard Burch accuses the Sierra Club Legal Defense Fund and other opponents of trying to delay construction of Animas-La Plata and to "break the water treaty."

In an open letter to tribal members published in the *Southern Ute Drum* in January, Burch warned that the only alternative to ALP is years of expensive litigation, echoing what happened to the Arapahoe and Shoshone tribes on the Wind River Reservation.

Burch, who has chaired the tribal council since 1966 except for a three-year hiatus required by law, is a giant figure on the reservation. Although often criticized for running the tribal government and its coveted network of jobs and benefits as a fiefdom, Burch has brought prosperity to the tribe — earning the Southern Utes the nickname of the "Hollywood Indians" from their Ute Mountain Ute neighbors.

Burch, with the help of tribal attorney Sam Maynes, has built water projects on the seven streams that cross the reservation and developed oil and gas reserves. Most recently, he launched plans for a new gaming operation. From his office in the tribe's modern headquarters building in Ignacio, Burch explains that the $20 million in development funds and 26,500 acre-feet of water from the Animas-La Plata settlement will ensure future prosperity by enabling the tribe to develop its coal reserves on the western edge of the reservation.

But Burch and Animas-La Plata face a local rebellion. The chief rebel is Ray Frost, a tall, barrel-chested man who, after three tries, won a seat on the tribal council this year. Frost used his booming voice to run a single-issue campaign against Animas-La Plata.

Frost says he was in favor of the project at first, but he charges that its benefits have steadily eroded. The original agreement allowed the tribes to sell or lease project water downstream to cities in Arizona and California. That would have made ALP extremely lucrative for the tribes, he points out, but the clause was deleted as the settlement bill made its way through Congress. California legislators, in particular, opposed the provision.

Second, under the cost-sharing agreement, ALP was broken in two: Phase I, which will be paid for with federal dollars; and Phase II, which must be paid for entirely by local water users. While all of the Ute tribes' water will be stored in Ridges Basin Reservoir under Phase I, virtually no delivery systems will be built to enable either tribe to use that water. Of the 65,700 acre-feet of water to be delivered to farmers in Phase I, only 2,600 acre-feet will reach Southern Ute farmlands.

The rest of the Southern Ute's water, 26,500 acre-feet of municipal and industrial supplies, and all of the Ute Mountain Ute's 32,400 acre-feet, will be useless unless Phase II is built. Frost cites a memo from David Walker, director of the Colorado Water Conservation Board, warning that the $154 million Phase II will never get funded.

In short, Frost fears Animas-La Plata could leave the tribes with a lot of expensive water sitting in a reservoir miles from where it's needed, with no way to move it and no legal authority to lease it downstream.

"Why is it called an Indian project if it does not help the Southern Utes?" asks Frost. Maynes, the Anglo water districts and Ben Campbell hoodwinked Congress, says Frost bitterly, while at home Leonard Burch "sold us a bill of goods."

Perhaps because of Frost's campaign, a record number of tribal members showed at the Bureau of Reclamation hearings in Durango last December to protest the project. Many said they want Congress and the non-Indian community to know that not all members support the idea.

"It's not an Indian project," says Dedra Militch, a young reporter for the *Southern Ute Drum* and one of several Southern Utes who have joined the Four Corners Action Coalition. "Our lawyers are really playing on this guilt trip so non-Indians feel like if they oppose the project they are doing harm to the Indians."

Militch and others compare Animas-La Plata to the Navajo Project, the Dolores Project and the Central Utah Project — three Bureau of Reclamation dams sold to Congress in part because they brought water to Indian reservations. But in all three cases, the portions of the projects that served the reservations were either dropped or only partially built.

Other people on the reservation, including many elders, say they would have opposed ALP before but never understood it because the tribal radio station and newspaper are censored. Others question why Leonard Burch refused to hold public hearings on the water settlement back in 1988, or let tribal members vote on the treaty.

"The Sierra Club is doing everybody justice," says Ray Frost. "The only thing is, the Sierra Club needs to come talk to the people of the Southern Ute Reservation instead of just speaking to our elected officials and laywers. They need to talk to the people."

Delays

The next round in the war over ALP is likely to take place in Washington, D.C. The Four Corners Action Coalition recently sent a delegation to the Clinton administration, asking them to block funding for ALP in 1994; and instead to help negotiate an alternative.

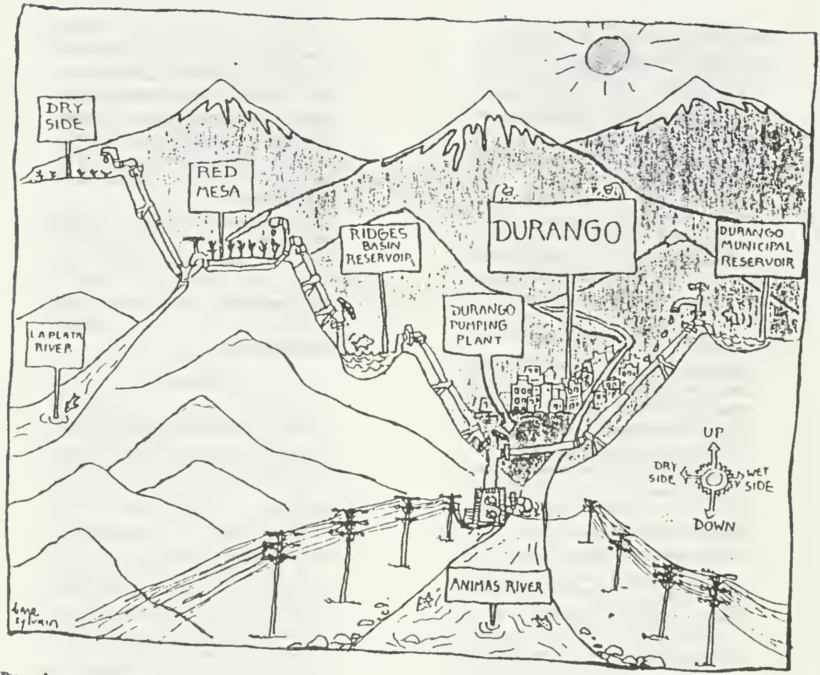
At the same time, Campbell says he and the rest of the Colorado delegation will push to see that ALP stays on track.

Meanwhile, Roland Robinson, head of BuRec's Upper Colorado Region, says he ordered the Durango field office to put everything on hold until the administration can review the project. But with few appointees in place, he doesn't expect an answer from Clinton or Interior Secretary Bruce Babbitt for several months. Robinson says that if a decision is made to continue, there are so many problems it may take BuRec a year or more to produce a final EIS — and that's without any lawsuits.

Delays work for opponents. Every year raises the cost by $40 million and brings it one step closer to the Jan. 1, 2000, deadline. In addition, Sam Maynes is said to be ill. Should that force him to retire, or even to significantly slacken his pace, no one knows who would be able to replace him at the head of the coalition.

On the other hand, the federal government can't allow the impasse to stand or the project simply to die. Dozens of Native American tribes in the West have agreed to negotiate their water rights, based in part on the apparently successful ALP settlement. Unless the federal government and Western states want to be deluged by water litigation, Clinton and Babbitt must either commit to Animas-La Plata, or find a better alternative. ■

Steve Hinchman is staff reporter for the *High Country News*.



Pumping water in two directions, the Animas-La Plata project has been called a Rube Goldberg machine

(From the Denver Post, Monday, Dec. 28, 1992)

RETHINKING ANIMAS-LA PLATA

IN A MOVE to end the growing impasse over the Animas-La Plata water project, environmentalists have hired a veteran Colorado water official to explore less costly and destructive means of achieving the same ends — including small dams if necessary.

This must be regarded as a highly positive development, because critics of the controversial plan have so far focused mainly on stopping it, rather than suggesting concrete alternatives, as was done with notable success in the debate over Denver's now-discarded Two Forks Dam.

The search for workable options will be conducted by longtime State Engineer Jeris Danielson, an independent but well-respected official who was sacked by Gov. Roy Romer earlier this year in a dispute over future water policy.

Danielson was retained as a consultant last month by the Sierra Club Legal Defense Fund, which has challenged Animas-La Plata as environmentally damaging and economically unjustified.

The project, which has been on the drawing board for 25 years, would satisfy longstanding Indian water claims, irrigate 125 square miles of farmland and provide drinking water for Durango and other cities in the area.

As now proposed, it would divert water out of the Animas River just south of Durango, pump it 500 feet uphill into a reservoir above the La Plata River Basin, and distribute it through a 240-mile network of pipelines and canals.

The massive undertaking would cost the taxpayers an estimated $640 million, or almost as much as Two Forks.

Among other things, Danielson has been asked to look at these alternatives:

- ✓ Providing additional water to the Ute Mountain Ute reservation by siphoning more out of the Dolores project north of Cortez.
- ✓ Supplying new water to the Southern Ute tribe, and increasing opportunities for fishing and boating as well, by building a small dam on the Mancos River or a tributary east of Mesa Verde.
- ✓ Expanding the amount Durango receives from the existing Florida project, perhaps by constructing a larger pipeline.

Combined with proven conservation strategies such as lining irrigation ditches with concrete, it is hoped that such options might yield as much water as Animas-La Plata without depleting the rivers so much that it would jeopardize endangered fish or undermine the rafting industry.

Admittedly, this is a pretty tall order. But in view of the shadow that Amendment 1 has cast over the state's ability to help finance the project, and the pollution concerns outlined by the Environmental Project Agency earlier this month, a serious re-evaluation is clearly well-advised.

The proponents of Animas-La Plata, including the U.S. Bureau of Reclamation, should welcome this chance to reassess the prospects for accomplishing their goals in a less traditional but more affordable manner.

Statement of the San Juan Citizens Alliance

Dear sir, it would be imprudent for the Subcommittee on Energy and Water Development to recommend appropriating money for the Bureau of Reclamation Dam construction project—The Animas-La Plata Project (ALPP) now billed in the Denver Post as the most expensive dam project ever to be built in Colorado.

For a project which has been in the planning stage and had over 12 million dollars spent on planning, it is now a project without a plan and project of major problems both economically and environmentally.

The project went through cost sharing and was divided into basically the Federal Phase and the Non-Federal Phase with the Federal Phase to be built first. The 1st phase included the Municipal and Industrial (M&I) segments for both Indian and Non-Indian entities and these had to be paid for by the M&I users. Today though, the project, because of the Squawfish Recovery Implementation Program, is a three phased project, basically. Water is available and approved (80,000 acre feet diversion or 57,100 consumptive) only for the M&I portion of the project (½ phase of Phase 1) yet the three project features proposed to be constructed are to be built full scale. These features are the Durango Pumping Plant, the 525 foot static head pump outlet tube, and the full scale Ridges Basin Reservoir with a capacity of at least 280,040 acre feet.

The M&I participants are required by law to pay back, or pay up front, their full share plus interest (M&I portion current Phase ½ of Phase 1). The Federal repayment portion applies to the project's irrigation segment which will not be completed and functional until completion of Phase second half of Phase 1 (a part of Old Phase 1) of the now basically three part project. Although full scale irrigation capacities are incorporated for construction into the pumping plant, tube, and reservoir, no water is available for this irrigation component construction and it will not be known if water will be available until the end of the seven year long Squawfish Recovery Program Study. Under present construction schedules the three above structures could be completed by then. Thus there may never be the water or delivery of water to provide any repayment of the requested Federal Expenditure in Phase ½ of Phase 1.

Luckily for the Taxpayer, Phase second half of Phase 1 and its Non-Indian irrigation water delivery systems are not to be constructed until the question of water availability is answered. Phase 2 is the entirely Non-Federal construction and payment phase which incorporates mostly the Indian segments of the Project.

VALID CONTRACTS ARE REQUIRED FOR CONSTRUCTION—THERE ARE NONE.

The question of repayment contracts is another interesting scam. Only San Juan County, New Mexico is financially capable of paying their share for their 30,800 acre feet of M&I water. The validity of their contract is now on appeal in the New Mexico Supreme Court, though. In addition, since the signing of the contract, the projected cost has escalated from 12.8 million to over 17 million this year and there is a 16.4 million cap on the contract requiring renegotiation of the contract or acquiring a lessor proportionate share of water if the 16.4 million total is to be exceeded. Remember construction has not even begun on the Project.

The Animas-La Plata Water Conservancy District has been unable to subcontract their water and thus obtain repayment capability for their share. Even the City of Durango has not signed on for this water. The district will be competing with the Ute Tribes in marketing their water in a non-existent market. This District's contract has yet to be amended to bring it into conformity with the San Juan Contract.

The project coordinating committee cannot officially meet since the required quorum of 12 members cannot presently legally be obtained and met. Neither the Southern Ute Tribe (26,000 acre feet of M&I water) and the Ute Mountain Ute Tribe (6,000 ac ft M&I) have approved contracts, and the Navajo Tribe certainly has not signed a contract for their 7,600 acre feet M&I allocation.

There are presently no valid contracts to warrant construction expenditures.

INDIAN DELIVERY FEATURES

Phase 2 probably will never be built since no Federal funding is to go into this phase according to both the New Mexico State Engineer, Eluid Martinez and the now fired head of Colorado's chief pro-development water agency, the Colorado Water Conservation Board, David Walker. The states and locals have no money. Interestingly most of the required delivery structures and dams in the water rights settlement and legislation passed by Congress to solve the Ute Water Claims in Colorado are in Phase 2. There is no settlement of the Ute Claims; ALPP is not now nor has it ever been an Indian water project. It resolves no Indian Claims in New

Mexico and in fact exacerbates the questions of Indian Claims among Indian Tribes and among the Tribes and Non-Indians.

Thus the Animas-La Plata Project billed and sold to Congress as a solution to the Indian Water Rights settlement is void or stripped of its Indian components.

ENVIRONMENTAL ISSUES

Environmentally the ALPP is Chaos.

The Draft Supplemental Environmental Impact Statement on the present plan for the ALPP is under major attack as being inadequate and incompetently done. In fact there is not even an approved Definite Plan Report for the current proposal.

The Sierra Club Legal Defense Fund has filed suit in Federal Court against the Bureau of Reclamation on the ALPP for violating provisions of the National Environmental Policy Act and the Clean Water Act. The draft supplemental EIS is on the 11 year old inadequate statement and does not consider alternatives.

The Ridges Basin Dam Site, owned by the Colorado Division of Wildlife and used as a Big Game Wintering Refuge, has no approved or even proposed mitigation plan for replacement. The Bureau of Reclamation is presently avoiding this fact by having filed condemnation in Federal Court in Denver against the DOW and Nature Conservancy over the property. Condemnation avoids the mitigation issue and deals only with property values and is an effective deterrent to public participation in the process.

The Wetlands issues have been ignored by the BOR.

The Razorbacked Sucker on the San Juan/Animas system has also recently been named as an endangered species to further complicate construction issues.

U.S. Fish and Wildlife Service in conjunction and coordination with other state and Federal Agencies are studying the serious Selenium concentrations and levels in both fish and wildlife and in the water itself in the San Juan Drainage.

Heavy Metal Concentrations exceeding state standards are found in Animas water at the location of the Durango Pumping Station site. High Mercury concentrations in fish from several local BOR reservoirs on the San Juan Drainage is causing public concern when the public is told to limit eating caught fish.

WATER RIGHTS ISSUES

As authorized in the 60's, the ALPP was a gravity flow, flood water storage, on stream dam and diversion project which would have supplied major flood control and had little other impact on the river and its users. The 1992 project is an entirely off stream, electric driven pump up storage project (using annually enough electricity to supply a city of 63,000 people) that because of limited pumping capacity allows flood waters to continue downstream wrecking havoc and impinges upon existing water rights in order to obtain its required water over its 11½ month pumping schedule. The ALPP returns no irrigation water back to the Animas.

Controversy to date has been limited to non-violent court action and verbal abuse. When and if water starts going up hill and the over 1000 junior water rights owners in Colorado are curtailed and the 2100+ Senior users in New Mexico begin watching their crops wither and die, violence will surely follow.

New Mexico's share of the Colorado River is around 647,000 acre feet annually (BOR figures). The BOR has filed on over 1,500,000 acre feet of water in New Mexico and is merrily going ahead with planning for projects with money appropriated by Congress to utilize much of this non-existent water. This needs congressional investigation. Indian water rights have not been adjudicated in New Mexico on the San Juan drainage. Some Non-Indian rights were adjudicated in 1948.

The Upper Colorado River Basin Compact is vague and not specific to the Animas River regarding water rights between the two states and the Animas-La Plata Project Compact deals only with ALPP project water. New Mexico Animas Farmers, with before the turn of the Century water rights, feel threatened. The bomb is waiting to explode into violence and lawsuits costing millions and millions of dollars with no easy solution because no planning and coordination is utilized by the system. The politicians have in the past avoided all issues with the ALPP and refused to look into it.

Ben Nighthorse Campbell, Congressman from Colorado, Eluid Martinez, State Engineer of New Mexico have both, on record, stated that if ALPP is constructed it will cost over $1,000,000,000 dollars.

It is time to look at ALPP, tear it apart, review it, and reauthorize it before any construction begins.

Please do not authorize expenditures of any tax dollars on the project until it is certain that repayment is guaranteed, until contracts are finalized, until a legally correct Supplemental EIS including full scoping process is completed, until a Definite Plan Report of the current proposal is completed, or until realistic cost benefit ratios are reviewed with current figures and project plans.

As the attached copy of an editorial from the Denver Post suggests now is the time to look at alternatives.

Statement of K.S. Moss, Hesperus, CO

Dear Mr. Chairman, the New Mexico House of Representatives passed unanimously House Memorial 65 introduced by Darla Whitney-Welles. Enclosed is a copy with the wording as it passed.

This memorial had passed the House Agriculture Committee unanimously also before going to the full house.

Your committee should recommend to the Department of the Interior that the New Mexico water allocation be allocated as is specified in the Memorial 65 and that the Bureau of Reclamation not continue holding this water hostage for support from the cities and county for the Animas-La Plata Project which is a large boondoggle.

The support of A-LP by the subcommittee is something which will come back upon the committee as a major embarrassment in the future.

Please do not support further funding for the Animas-La Plata Project; it is time for it to die so that workable alternatives can be investigated.

PS: Also enclosed is a copy of editorials from the Durango Herald regarding the Bureau of Reclamation and A-LP.

HOUSE MEMORIAL 65

41ST LEGISLATURE - STATE OF NEW MEXICO - FIRST SESSION, 1993

INTRODUCED BY

Darla Whitney-Welles

A MEMORIAL

REQUESTING THE STATE ENGINEER TO FORMALLY REQUEST THE BUREAU OF RECLAMATION OF THE UNITED STATES DEPARTMENT OF THE INTERIOR TO TRANSFER, RELEASE OR ASSIGN OWNERSHIP OF NEW MEXICO'S WATER ALLOCATION UNDER THE ANIMAS-LA PLATA PROJECT TO THE CITIES OF AZTEC, BLOOMFIELD, FARMINGTON AND THE COUNTY OF SAN JUAN.

WHEREAS, on or about May 1, 1956, the state engineer placed forty-nine thousand five hundred ten acre-feet of water into trust with the bureau of reclamation of the United States department of the interior at no cost to the United States for the Animas-La Plata project; and

WHEREAS, in 1956, the purpose of the Animas-La Plata project was primarily to benefit agricultural needs and in 1978 the mission changed to include municipal and industry needs with the agricultural need placed as a secondary priority; and

WHEREAS, in 1978, the Animas-La Plata project changed from a gravity-flow project to a pumping project; and

WHEREAS, on or about June 30, 1986, the Animas-La Plata project became a two-phased project rather than a one-phase project; and

WHEREAS, on or about June 30, 1986, the Animas-La Plata project changed from a fully federally funded program to a cost-sharing program, with phase two of the project being built entirely from non-federal funds; and

WHEREAS, during the first special session of the thirty-ninth legislature in 1990, two million dollars ($2,000,000) in severance tax bonds were authorized to assist San Juan county with initial start-up costs of the Animas-La Plata project; and

WHEREAS, San Juan county on April 17, 1990 approved a tentative repayment contract between the United States and the San Juan water commission; and

WHEREAS, the Animas-La Plata project is jeopardized by continued delays, including noncompliance with the provisions of the federal Environmental Protection Act, extensive litigation, inadequate funding to meet construction deadlines and growing adverse public sentiment; and

WHEREAS, start-up construction has been continually delayed, the complete construction of the Animas-La Plata project is unlikely to be funded in full and the cost with no construction having started has presently exceeded the cost limitations in the tentative repayment contract with the United States; and

WHEREAS, cities and counties are unable to plan for and determine availability of future water supplies, services and infrastructure to meet the health and welfare demands of their citizens and presently are unable to supply water to meet current needs for economic development and growth;

NOW, THEREFORE, BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES OF THE STATE OF NEW MEXICO that the state engineer formally request the bureau of reclamation of the United States department of the interior to transfer, release or assign ownership of New Mexico's water allocation under the Animas-La Plata project to the cities of Aztec, Bloomfield and Farmington so that the water can be held in reserve and used beneficially by San Juan county residents; and

BE IT FURTHER RESOLVED that the water be transferred, released or assigned as follows: three thousand acre-feet of water to Aztec, three thousand acre-feet of water to Bloomfield, ten thousand acre-feet to Farmington and the remaining acre-feet of water to be held by San Juan county for the rural domestic water user associations and other future needs of both the cities and the county; and

BE IT FURTHER RESOLVED that copies of this memorial be transmitted to the state engineer, to the interstate stream commission and to the governor.

(From the Durango Herald, Sunday, Dec. 22, 1992)

BUREAU OF RECLAMATION AND THE A-LP

Its performance qualifies the bureau for elimination

The performance of the Bureau of Reclamation in conjunction with the Animas-La Plata Project has been an abomination.

This entrenched bureaucracy which, believe it or not, is supposed to be working for you, the taxpayer, has spent more time defending itself against lawsuits and the threat of lawsuits, than it has keeping the water project on track.

The $641 million A-LP would pump water from the Animas River into the proposed Ridges Basin Reservoir and then into the La Plata River. As part of law settling Southern Ute and Ute Mountain Ute water claims on seven Southwest Colorado rivers, the project will provide water for towns, industry and farmers in the Four Corners area.

If it's ever built, the A-LP will be bureau's last dam project, but the bungling bureau has been conducting itself as if the A-LP is its first water project!

The bureau has been sued twice this year and threatened with lawsuits two other times, primarily because the project as designed does not comply with *federal* environmental laws. (This is like fighting with your sister. The Bureau of Reclamation is, after all, a federal agency). One of those threatened lawsuits came from area water districts and Indian tribes who are supposed to be the bureau's allies in getting the A-LP built.

At every turn, the bureau has lost these legal battles.

Most recently in court, U.S. District Judge Zita Weinshienk ruled the bureau under the Department of Interior violated the Freedom of Information Act by refusing to release answers to questions about the Animas-La Plata posed by -- you guessed it -- another branch of the federal government, the Office of Management and Budget. The judge promptly ordered the release of that information, which the *Herald* had also sought to obtain.

"It's ridiculous that we have to keep suing the government to get it to comply with the law on Animas-La Plata," Lori Potter, attorney with the Sierra Club Legal Defense Fund, said after Weinshienk's ruling. "This is the fourth straight time we've beaten them over legal violations."

How much time and money has been spent by bureau attorneys waging these futile battles? The *Denver Post* calculated last year that proponents had spent $1 million fighting lawsuits. Wait until the tab for 1992 comes due.

Now the Animas-La Plata is in for further delays. The Environmental Protection Agency has said the Supplemental Environmental Impact Statement is inadequate and should be revised. This latest turn of events makes the A-LP a candidate for review by the president's Council on Environmental Quality, a possible death knell for the A-LP. That will be President *Clinton's* council and with the bureau's abysmal performance, chances are slim that the project can withstand such scrutiny.

Whose interests are the bureau serving: not the water districts', not the Indian tribes' and certainly not those of the general public.

If its record with the A-LP is any indication of how the Bureau of Reclamation performs nationally, its last major water project certainly won't be built. And the Bureau of Reclamation will certainly be one of the first federal agencies to be axed by the Clinton administration. And from where we sit, it will be good riddance to these waterlogged bureaucrats.

Senator DECONCINI. The committee will take a short recess. Senator Kerrey will be here after the vote to continue the hearing.

Thank you.

[A brief recess was taken.]

NEBRASKA WATER RESOURCE PROJECTS

Senator KERREY [presiding]. The subcommittee will now come to order.

First of all, I want to welcome each of you to the hearing. I am sure you all know that we are in the midst of votes on the floor of the Senate. We will be interrupting your testimony. I apologize for that interruption.

I am sure you have all been here before, and the more succinct you can be with your presentation, the more likely it is that all of you will get to testify. So, I would appreciate your giving some consideration to that.

I welcome in particular the Nebraskans who are in this first panel and the senior Senator from Nebraska. I would just make it clear to the audience, who I assume understand this, that in the West, water means jobs. It is the dominant issue in American politics today. What can the Government do that will enable the private sector to create more jobs? And we are all focused on that. If we can do something to enable the private sector to create jobs today, it is apt to be that that will enjoy support of the public.

Well, water development creates jobs. It creates a capacity to generate income, it has been very important in the West for the development of our economy. We not only have created a lot of jobs, we have created a lot of wealth. In Nebraska, some $2.3 billion of additional revenue just as a consequence of irrigation, a total $8.6 billion worth of agricultural products a year. It is estimated that there are 30,000 jobs that are there simply because our predecessors had the good sense to develop that resource.

It obviously accomplishes a great deal of flood control effort in order to feel some economic stability. It is critical to have that flood control and, further, it seems to me important to note that not only its recreation but environmental purposes will give us the capacity to generate jobs, as well.

The world has changed when it comes to water development. We understand that. We understand the need to have a multipurpose effort. We understand the need to factor in environmental concerns. We understand that we have got to be conscious, not just of the economy, but we have got to be conscious of other considerations. And I appreciate very much those of you here from Nebraska, your understanding that.

I now welcome the senior Senator from Nebraska, Senator Exon. Please proceed.

STATEMENT OF HON. JAMES EXON, U.S. SENATOR FROM NEBRASKA

Senator EXON. Mr. Chairman, thank you, very much.

Mr. Chairman and members of the committee, I am pleased, indeed, to be here today, as I have been previously, to testify on the water resource needs of Nebraska. My duty this morning is to simply introduce some Nebraskans and one South Dakotan that have traveled to Washington to share their thoughts on the very important matter of funding for our water development projects.

As you know, water development is a great interest to this Senator. I know funding will be very tight for the coming year. I look forward to working with this subcommittee to find a way to meet as many of these needs as possible. My office continues to receive more detail from Nebraskans about water funding. In addition to the groups represented here, I have heard from the Bostwick Irrigation District which is trying to do something to improve water efficiency in the Republican River basin.

Mr. Chairman, I am submitting for the record a copy of a letter that they recently forwarded to me and ask it to be made part of the record following my remarks.

Senator KERREY. Without objection.

Senator EXON. Senator Kerrey, I will ask our staffs to cross-check with information during the next several days to make sure that we have all the bases covered and that everything that needs to be submitted for the record is on file.

With that, I will certainly congratulate you for chairing this hearing today and I will turn this back to the witnesses so they can get on with the very, very important business at hand.

I thank the Senator.

Senator KERREY. Thank you, Senator. Your leadership, both as Governor and Senator, certainly, in this area is commendable. You have left quite a legacy already and I appreciate your leadership now in the Senate.

[The letter follows:]

LETTER FROM MIKE DELKA, MANAGER, BOSTWICK IRRIGATION DISTRICT, NEBRASKA

March 10, 1993

The Honorable J. James Exon
United States House of Representatives
330 Hart Building
Washington, D. C. 20515

Dear Senator Exon:

Last year we called upon you to help us obtain a write-in to the Bureau of Reclamations budget to keep a much needed lining project on the Courtland Canal in Nebraska near the Nebraska-Kansas state line. We had hoped the Bureau would be able to keep the funding for the next phases of this project in their budget so future write-ins would not be required.

I have recently been in touch with the Bureau's Project Manager in Grand Island, Nebraska to see that this years funding is in order. He informs me the budget will not be announced until around April 5, which will leave little time to react if the needed funds will be cut and a write-in will be needed to keep continuity in the project. The amount of funds needed for 1994 is $1,230,000.

As you know, this lining project in Nebraska is to protect seeped areas where productivity to the farmers fields is being severely curtailed by canal seepage. Kansas may be of help because this canal is their supply canal from Harlan County Reservoir to Lovewell Reservoir. Both states suffer losses due to the seepage. The Bureau agreed to repair these areas when it was discovered the canal had experienced this problem since it's construction. The project is to be completed in three phases with phase one nearing it's completion and phase two being under way. It is crucial to our effort to keep the funding in line. If the 1994 funds are not approved much of the design work ect., already completed for phase three and the ability to complete the project in a timely manner will be lost causing cost overruns.

Sincerely,

Mike Delka, Manager
Bostwick Irrigation District in Nebraska

NEBRASKA WATER RESOURCES PROJECTS

STATEMENT OF J. MICHAEL JESS, DIRECTOR, NEBRASKA DEPARTMENT OF WATER RESOURCES

Senator KERREY. We will turn immediately now to Mike Jess, the director of Water Resources in the State of Nebraska.

Welcome, Mr. Jess.

Mr. JESS. Thank you, Mr. Chairman. I have given the Committee copies of my statement so I will just highlight what I am going to say and, of course, there will be others with regard to the particular projects, and they will follow me and be able to give you more details.

We have had one handicap this year, and I think I want to bring that to your attention, as well. The Federal agencies are unable to tell us at this juncture what the amounts are that are in the President's recommendations. And so our numbers to this committee, I am afraid, will be somewhat approximate. I trust that when those agencies come before the Committee in the next few weeks you will be able to get more precise estimates.

MISSOURI RIVER FISH AND WILDLIFE MITIGATION PROJECT

The first issue is the Missouri wildlife mitigation program. Of course, this is the result of the efforts by the four States and the number of local entities that are attempting to restore wildlife habitat that has resulted in loss of habitat due to the navigation and flood control works of the Corps of Engineers over the years. Our estimate, at least at this juncture, is that there is the capability for approximately $12 million worth of work to be done in 1994.

MISSOURI NATIONAL RECREATION RIVER

The next item is the recreational river downstream on the Missouri River from Gavins Point Dam. There has been considerable bank erosion and we believe that is as a result of the clear water that comes out of the Gavins Point Dam is causing the banks to erode, and there has also been a number of endangered species issues that have been undertaken the last year. We are hopeful that with the unexpended amounts, as well as those new moneys that are needed for next year, that the committee will see fit to advance those appropriations, as well.

PLANNING ASSISTANCE TO STATES

Section 22 is a planning assistance to the States and to native American tribes. I bring this up, not so much for the dollar amounts, but to ask that the committee reexamine the 50–50 matching formula that you have established. Our experience so far is that very few of the States and tribes are able to take advantage of this, so we hope that you will look at that, perhaps with an eye to giving greater credit to in-kind services by the non-Federal partners.

Section 1135 has also been important to the State for the Missouri mitigation, especially. I think Mr. Oltmans, when he talks, will say some more about that.

The Antelope Creek study, the Burt County—Burt-Washington reconnaissance study, the Wood River flood control design, and the Papio Creek and tributaries project are also worthy of your consideration and have the support of Governor Nelson.

BOSTWICK UNIT, NEBRASKA

Senator Exon talked a little bit about the Bostwick project. That is a project where membrane sealing of their canals is, hopefully, going to alleviate considerable high-water and seepage problems. A construction contract was granted last June, and this initial phase will be completed in May. A contract for the second phase is scheduled to be awarded also in April, and in order that this program move forward in a timely fashion, we believe that about $1.25 million is needed in fiscal year 1994 for the phase 3 completion.

FARWELL UNIT, NEBRASKA

The Farwell project, which you will also hear about a little later in more detail, involves construction also of some buried pipelines and membrane linings. And it is our understanding that about $650,000 is needed for it.

NORTH LOUP PROJECT, NEBRASKA

Finally, I think, on the North Loup project, the end is clearly in sight. It is our understanding that about $8.3 million is needed in 1994 to complete that project. Last September it was about 90-percent completed, as we understand, and so the job should be done in the near future.

Senator KERREY. Mike, I am going to have to interrupt. I will have to go vote. I will go quickly and I will come back quickly. I will be right back.

[A brief recess was taken.]

PREPARED STATEMENT

Senator KERREY. The hearing will come to order.

Had you finished, Mr. Jess?

Mr. JESS. I was almost completed, Mr. Chairman. The Prairie Bend project is the last issue. And in order to complete the project sponsor's alternative, $75,000 is needed for the Bureau's share.

That is my testimony. Thank you.

[The statement follows:]

STATEMENT OF J. MICHAEL JESS

Mr. Chairman and committee members, I am Michael Jess, Director of Water Resources for the State of Nebraska. This written testimony is given on behalf of Ben Nelson, Governor of Nebraska. My purpose is to urge your support for several water resources projects and investigations needed in my state.

Missouri River fish and wildlife mitigation (Corps of Engineers).—Few question the benefits navigation on the Missouri River provides. Since completion of the navigation improvements, grain and other bulk cargo have moved efficiently along the inland waterway.

Despite the well-meaning efforts of its designers, inadvertent environmental problems now exist. An estimated 475,000 acres of fish and wildlife habitat in Iowa, Missouri, Kansas and Nebraska have been lost. Jointly, the Corps, the four states, and various local interests have devised innovative plans. Land acquisition activities began earlier this year.

For fiscal year 1994, we urge at least $12 million be appropriated and added to any unexpended carry-over funds.

Missouri National Recreational River (Corps of Engineers).—Since construction of the Missouri River mainstem water storage facilities, substantial bank erosion has resulted following release of the water. Productive farmland and environmentally sensitive properties have been impacted adversely. The area hardest hit lies between Gavins Point Dam and Ponca, Nebraska.

Recent activities include endangered species habitat preservation and restoration. Construction of bank stabilization facilities will protect high-value properties threatened by erosion. To pursue these activities we encourage sufficient monies be added to the unexpended sums appropriated previously.

Section 22 planning assistance (Corps of Engineers).—Beginning in fiscal year 1993, Section 22 activities were undertaken on a 50:50 basis between the Corps and the states and Native American tribes. Through experience we learned that the 50:50 match effectively stalled most partnership activities. As a result, the Committee is again urged to review the one-for-one requirement and to allow greater credit be given for in-kind services by federal partners.

Other Corps of Engineers' projects and programs.—In addition to needed operation and maintenance funds requested by the Corps, Nebraska is supportive of these: initiation of the Antelope Creek study; completion of the Burt-Washington reconnaissance study; Wood River flood control design; and Phase 3 Papio Creek and tributaries project.

Bostwick Unit (Bureau of Reclamation).—Excessive seepage from the Upper Courtland Canal system has resulted in high water table problems. The Bureau's remedial proposal calls for installing membrane along a five-mile reach of the canal. A construction contract was awarded last June. This initial phase is scheduled to be completed May 1. A contract for the second phase is scheduled to be awarded next month. Phase 3, the final construction contract, needs to be awarded in June 1994, to complete the program in an orderly fashion. Phase 3 will require approximately $1.25 million in fiscal year 1994 to allow completion in fiscal year 1995, utilizing available Bureau personnel for construction inspection/contract administration.

Farwell Unit (Bureau of Reclamation).—A cooperative program between the Bureau and the Farwell Irrigation District was started in fiscal year 1981. This water conservation program involves converting open laterals to buried pipelines, and installing membrane lining on open canals. In addition to the water conservation program, the Bureau began subsurface drain construction in fiscal year 1991 to alleviate high ground water problems downgradient from Sherman Reservoir. To keep these programs on an efficient and effective schedule, we urge funding of at least $650,000 in fiscal year 1994.

North Loup Division (Bureau of Reclamation).—The North Loup Division was estimated to be more than 90 percent complete last September. The final major construction contracts have been awarded with completion scheduled in fiscal year 1994. We understand and encourage funding for fiscal year 1994 amount to $8,288,000.

Prairie Bend Unit (Bureau of Reclamation).—In order to match the Bureau's required cost share and to complete supplemental planning activities, $75,000 needs to be appropriated. The funding will permit completion of the Project "sponsor's alternative."

Mr. Chairman, thank you for your past support for these and other activities.

Senator KERREY. Who gets to go next?

Jim Peterson, can you go?

MISSOURI NATIONAL RECREATION RIVER

STATEMENT OF JIM PETERSON, MISSOURI RIVER BANK STABILIZATION ASSOCIATION

Mr. PETERSON. Thank you, Senator Kerrey, for the opportunity to testify before you today. I will be brief.

The committee has testimony submitted on behalf of the Missouri River Bank Stabilization Association. This project involves a 59-mile stretch of the Missouri between Yankton, SD, and Ponca, NE. It is in a relatively natural state. It is the only segment of the Missouri which is still in a natural state below the Gavins Point

Dam. We have been doing some work on this river thanks to the aid given us by Congress. Substantial structures have been built in the river. They are doing the job that they were designed to do and we hope to continue with the development of that as the abilities enable us to do it.

At this time, we are working at the development of some game protection areas, some forestation along the river to enhance the beauty of the river to return it as nearly as possible to its truly natural state. We hope to get some funding for that in the future. We are in the developing stage now on that.

At the present time, we need some funding for the maintenance and operation of the structures there that were previously put in, and that being the situation this year and in light of the budget constraints that you folks face, we thought we would constrain our request somewhat, and we would at this time ask you for consideration of a request for $200,000 for O&M for that section of the river.

I would be happy to answer any questions that you might have. We will answer them if we can, and we certainly do appreciate your help in the past.

[The statement follows:]

STATEMENT OF J.M. PETERSON

For and on behalf of the Missouri River Bank Stabilization Association, we thank you for your courtesy in providing this opportunity to appear before you with reference to the fiscal year 1994 budget. We truly appreciate your granting us the privilege of testifying, and we likewise appreciate the concern, courtesy, and consideration you have shown us over the years we have testified before your sub-committee.

The project on behalf of which we appear covers the last "free running" segment of the Missouri River lying below the main-stem dams. This fifty-nine mile reach of "wild" river marks the boundary between Nebraska and South Dakota, from Gavins Point Dam near Yankton, South Dakota to Ponca State Park near Ponca, Nebraska. This is the sole remnant of the geological "old" Missouri, that occupying the broad, expansive valley below Yankton which was not filled and narrowed by the most recent glaciation. The river, be it bordered by fertile fields, edged by thick stands of cottonwood and willows, overlooked by oak-clad, and sometimes cliff-like bluffs, relentlessly eroded its sandy floodplain. Such erosion is exacerbated by erratic and varying discharges of water from Gavins Point Dam, discharges governed by the needs for flood control, hydropower generation, and navigation. Presently, the discharges are further complicated by drought conditions in the northern plains. In fiscal year 1993, Congress demonstrated its interest in and concern for this unique reach of the Missouri by appropriating $200,000.00 for this project. For that we are truly appreciative.

Today we are here to request that funding for the Missouri National Recreation River project, authorized in 1978 under Section 707 of Public Law 95–625, be included in the budget for fiscal year 1994. At the time this project was authorized by Congress, its cost (to be spread over a period of years) was identified as $21,000,000.00. We request that the Missouri National Recreation River project funding be continued again this year. For fiscal year 1994, $200,000.00 is needed for operation and maintenance of works previously built in this segment of the river under the Section 32 Streambank Erosion Control and Demonstration Act.

The continuation of funding for this project will enable the Corps of Engineers to further its work, if so directed by the Congress, to contain and preserve the river and protect the investment of some $7,000,000.00 worth of work already completed. Congressional authorization coupled with previous funding of this project, is a clear indication that financial responsibility for this project is that of the federal government. This, indeed, is a National River, and so designated by the Congress.

Funding of this project will enable the project managers to continue the efforts to provide improved access to the river, maintain protection for the endangered least terns and piping plovers, check streambank erosion where necessary, develop game production areas adjacent to the river and, in general, act to preserve and protect the river corridor in this reach of the historic Missouri.

Our testimony would not be complete without again thanking you for the consideration you have shown outdoorsmen, farmers, environmentalists and others who constitute the Missouri River Bank Stabilization Association.

We would be pleased to respond to such questions as you may have.

Thank you.

STATEMENT OF NEBRASKA STATE SENATOR STAN SCHELLPEPER

Dear Mr. Chairman, it is with enthusiasm that I offer my name in support of the efforts of the Missouri River Bank Stabilization Association. It has been only since redistricting that I have had the pleasure of representing this area of the state, however, I have long admired this segment of the Missouri River for which this request is being made.

The portion of the river in question, the Wild Missouri, is a wide, braided river providing abundant habitat for fish and fowl. It is a state and national treasure, not only for its fertility, but also for its aesthetic and recreational value. In contrast, an extensive network of dams and other channelizing structures have rendered most of the lower river, a swift moving and uninspiring canal. Realizing the damage to the ecology and fertility of the river such measures have caused, efforts have begun to reverse the damage on the lower river by recreating the features that remain, for the most part, only on the wild Missouri.

Past efforts of the Association to preserve our river and the wisdom of this subcommittee to fund preservation efforts is to be commended. I would strongly encourage the subcommittee to authorize funding for the continued maintenance of structures previously built. We must insure that our past investment in preserving the river are protected.

Thank you for your consideration.

PAPIO RIVER AND TRIBUTARIES PROJECT

STATEMENT OF STEVE G. OLTMANS, GENERAL MANAGER, PAPIO/MISSOURI NATURAL RESOURCES DISTRICT

Senator KERREY. It is a beautiful stretch of river. We appreciate what you have done with it.

We will just go right down the line.

Steve Oltmans?

Mr. OLTMANS. Senator Kerrey, thank you very much. I am here on behalf of the Papio-Missouri Natural Resources District representing 140 miles of the Missouri River. We are here supporting the final appropriations, I believe, for the Papio River and tributaries flood control project in the metropolitan area of Omaha. We will support the administration's funding at whatever level that might happen to be when the budget is brought to the hill.

MISSOURI RIVER FISH AND WILDLIFE MITIGATION PROJECT

Regarding the Missouri River mitigation, we were told that Congress might look at something around $11, $12, or $13 million so that the States of Missouri, Kansas, Iowa, and Nebraska can get serious about the mitigation as it was passed in 1986 by Congress. We are really enthused about that, to come back to the river theory and philosophy in Nebraska and Iowa particularly is really growing with enthusiasm in the populous that we represent.

The last two things I would just make a quick comment on us that it is important that the Corps continues to receive at least $15 million a year for section 1135 funding. We use that extensively on the river trying to revitalize some of the old chutes for fishery and habitat, as well.

And finally, section 22, the planning money. We, too, as Mr. Jess expressed, have concern about the 50–50 cost share. We would like to have that examined. We recognize the need for cost share, but we think that 50 percent is too severe for many local entities that to use it adequately.

In conclusion, I am representing a district that represents one-third of the population of the State of Nebraska and the metropolitan area of Omaha. We are enthused about completing the Papio flood control project aggressively, working with the Corps on the Missouri River mitigation program and utilizing 1135 and section 22 for the benefit of the river, as well.

Thank you, very much, for this opportunity

Senator KERREY. Thank you.

[The statement follows:]

STATEMENT OF STEVEN G. OLTMANS

Papillion Creek and tributaries lakes, Nebraska.—Support: Administration's Funding Level for fiscal year 1994 for Big Papillion Creek Channel Flood Control/Recreation Project Construction; Administration's Funding Level for FY 94 for Operation & Maintenance of Flood Control/Recreation Projects.

Missouri River mitigation P.L. 99–662 (Section 601).—Request: Appropriation of $12,000,000 for Construction/Real Estate Acquisition for FY 94.

Project modifications for improvement of the environment: P.L. 99–662 (Section 1135, as amended).—Request: Appropriation of $15,000,000 for FY 94 Projects; and Specific Funding for Hidden Lake, Lower Bullard Bend, Glovers Point, and Hole-in-the-Rock Restoration Projects in Degraded Missouri Riverbed Reach.

Planning assistance to States: P.L. 93–251 (Section 22, as amended).—Request: Continued funding, but modify cost-share requirements.

PAPILLION CREEK AND TRIBUTARIES LAKES, NE

Support—Administration's Funding Level for FY 94 to Complete Big Papillion Creek Channel Flood Control/Recreation Project construction.

Support—Administration's Funding Level for FY 94 for Operation and Maintenance of Flood Control/Recreation Project.

We strongly support the Administration's funding level for the completion of construction and for the operation and maintenance of the Papillion Creek and Tributaries Lakes, NE project for fiscal year 1994.

The Papillion Creek and Tributaries Lakes Project was originally authorized by Public Law 90–483 (1968 Flood Control Act). The then authorized project consisted of a system of 21 small dams and reservoirs for the purposes of flood control, recreation and water duality enhancement in the 402 square mile watershed. Four of these dams were built (Sites 11, 16, 18 and 20) prior to a revised authorization by Section 401(A) of the 1986 Water Resources Development Act, Public Law 99–662, which called for deauthorization of the remaining 17 dams in favor of construction of a 2¼ mile channel improvement on the Big Papillion Creek in Omaha.

The Papio-Missouri River Natural Resources District is the local sponsor for the Big Papillion Creek Channel Project. The purpose of the project is simply to construct a channel that would contain a flood caused by a 50-year storm event. These measures are expected to reduce annual damages in the Big Papillion Creek floodplain by at least 60 percent, without causing significant changes upstream or downstream from the channel improvement area. Improvement features begin at the West Center Road (Highway 38) bridge and extend downstream about 2¼ miles through the "L" street bridge (Highway 275). A recreation trail for bicycling and walking/jogging will be constructed within the channel improvement right-of-way. Phase I ("L" to "F" Street) of the project is completed, Phase II ("F" Street to West Center Road) is under construction and should be completed in fiscal year 1994. A non-structural component consists of a basin-wide flood emergency plan which includes an electronic flood warning system.

The Papillion Creek and Tributaries Lakes, NE, Project is a high priority for the City of Omaha, the Papio-Missouri River Natural Resources District and the State of Nebraska. It should be so for the federal government as well.

MISSOURI RIVER MITIGATION: PUBLIC LAW 99–662 (SEC. 601)

Request—Appropriation of $12,000,000 for Constructions Real Estate Acquisition in FY 93.

We strongly support a funding level for fiscal year 1994 of $12,000,000 for Fish and Wildlife Mitigation of the Missouri River Bank Stabilization and Navigation Project as authorized under Section 601 of P.L. 99–662.

The four states of Iowa, Nebraska, Kansas and Missouri have long awaited implementation of this project, authorized in 1986, to restore vital aquatic habitat lost through river degradation caused by the Federal Bank Stabilization/Navigation Project and mainstem reservoirs. Adequate funding to match the U.S. Army Corps of Engineers capabilities is the most efficient means of meeting the intent of this mitigation program. We are pleased that funding was appropriated for construction in fiscal year 1992 and fiscal year 1993.

The above mentioned four states continue to be united in this effort to renovate this 732-mile reach of the Missouri River. It is critical that sufficient funds be appropriated to keep the mitigation project on schedule.

PROJECT MODIFICATION FOR IMPROVEMENT OF THE ENVIRONMENT

P.L. 99–662 (Section 1135, as amended).

Request—Appropriation of $15,000,000 for FY 94 Projects.

Request—Specific Funding for Hidden Lake,-Lower Bullard Bend, Glovers Point, and Hole-in-the-Rock Restoration Projects in Degraded Missouri Riverbed Reach.

We wholeheartedly support a national funding request of $15,000,000 for project modifications for improvement of the environment. We similarly support the usage of a portion of these funds for projects in a degrading reach of the Missouri River.

Locally, we have been very aggressive in our support of the Corps of Engineers high priority project recommendations within our Natural Resources District. The recently funded (fiscal year 1993) Boyer Chute—urban wetland restoration project is an excellent example of how local government meshes with Federal agencies in cooperatively completing these 1135 projects. Continued funding for additional projects would restore vital aquatic habitat lost through river degradation caused by the Federal Bank Stabilization/Navigation Project and mainstem reservoirs.

Planning and feasibility analysis for many of these projects will be finalized by the Corps of Engineers in the current 1993 fiscal year. The Papio-Missouri River Natural Resources District will continue to act as the local cost-share sponsor for design, implementation and development of these sites.

The Papio-Missouri River Natural Resources District is committed, ready to begin, and extremely optimistic about the immediate and long-range benefits of these restoration efforts. The Administration's recognition of the national priority and scope of these projects, coupled with this timely funding support, will serve as a catalyst for us to continue our wetland/habitat reclamation efforts along the entire Missouri River corridor.

PLANNING ASSISTANCE TO STATES

P.L. 93–251 (Section 22, as amended).

Request—Continued funding but modify cost-share requirements.

Section 22 activities were originally authorized in the 1974 Water Resource Development Act as 100 percent Federal cost for this much needed technical planning assistance (maximum of $300,000 annually available within a state). The 1990 Water Resource Development Act amended this program requiring that by fiscal year 1993, the non-Federal entity sponsor this technical assistance on a 50 percent cost-share basis.

This 50:50 cost-share requirement has severely limited most of these Federal/non-Federal partnerships. Therefore, while we support continued funding for the Section 22 program, we strongly urge the Committee to review this one-for-one provision as well as allowing greater credit to be given for in-kind services provided by the non-Federal partner.

FARWELL UNIT, NEBRASKA

STATEMENT OF THOMAS KNUTSON, GENERAL MANAGER, FARWELL IRRIGATION DISTRICT

Senator KERREY. Now, we have the Farwell Irrigation District and Tom Knutson.

Mr. KNUTSON. Thank you, Senator.

In the early 1980's the district and the Federal Government joined hands to work together to try to solve drainage problems within the Farwell irrigation project. We wish to thank the committee and the Congress for their past support for funding on that effort. And we would urge the committee to support a final request of approximately $675,000 for fiscal year 1994.

If appropriated, Farwell would use part of the money for their ongoing water conservation program, which includes converting open laterals into pipe and lining open canals. The Bureau of Reclamation would use the remainder of the money for drainage problems created by the project in the Loup City, NE, area.

The dollars appropriated in fiscal year 1993 were used to convert about 5 miles of lateral into pipe and to bottom-line over a mile of open canal. At this time, we have approximately 135 miles of the district's laterals and pipe, thus reducing the seepage from those canals to zero.

The Bureau of Reclamation has informed us recently that we now divert 25 percent less of what is in our system as a result of our conservation program. We estimate that we have approximately 45 miles of laterals left, and if funded we would continue to bury those laterals in a continued effort with the Federal Government.

The conservation initiative which started again a number of years ago, has provided a tremendous savings in water as well as maintenance costs. The Congress and its support has played a very positive role and we applaud them for their support.

Thank you, Senator, for the opportunity to testify.

[The statement follows:]

STATEMENT OF TOM KNUTSON

Dear Mr. Chairman, Mr. Chairman and members of the Committee. My name is Tom Knutson and I am the General Manager of the Farwell Irrigation District located in Farwell, Nebraska.

The Farwell Unit is a project located in the central part of Nebraska in Howard and Sherman Counties and provides water to 50,051 acres of land. Construction of the project began in 1959 and was completed in 1966.

The project has provided many benefits to the two county area. For that, the waterusers and residents are very appreciative. However, when the project was constructed, as was the practice in those days, it did not include lining for the canals or pipe for the laterals. Therefore, a large percentage of the water that was diverted was not delivered to the wateruser. The water not delivered is lost primarily through seepage from the canals and laterals back into the groundwater table causing us problems in the project area.

In the early 1980's, the District and the federal government, joined hands to work together to try to solve the problem. We wish to thank the Committee and the Congress for their past support in funding to help correct that problem. We request and urge the Committee to support a final request of $674,000 for fiscal year 1994 for the Farwell Unit.

If appropriated, the Farwell District would use part of the money for their ongoing water conservation program, which includes converting open laterals into pipe and lining open canals. The Bureau of Reclamation would use the remainder of the money for drainage problems, created by the project, in the Loup City, Nebraska area. I regret that I cannot provide the specific breakdown, but it was not provided by the administration.

The dollars appropriated for fiscal year 1993 were used to convert 5 miles of lateral into pipe and to bottom line over a mile of open canal. At this time, we have approximately 135 miles of the District laterals in pipe, thus reducing the seepage from those laterals to zero. The Bureau of Reclamation has informed us that we now divert 25 percent less water as a result of our water conservation program.

We estimate that approximately 45 miles of lateral could be converted to pipe and that nearly 100 miles of main canal could be lined in the future. The dollars requested for fiscal year 1994 would be utilized towards that continued effort.

This water conservation initiative, which started a number of years ago, has provided the District a tremendous savings in water, as well as a savings in maintenance costs. The Congress and its support has played a very positive role, in that regard, and we applaud them for their support.

We thank you Mr. Chairman and members of your Committee for your support. It means alot to those of us in the Farwell Irrigation District.

NORTH LOUP PROJECT, NEBRASKA

STATEMENT OF DONALD HUGHES, PRESIDENT, TWIN LOUP RECLAMATION DISTRICT

Senator KERREY. Thank you, Tom, for the work you have done, particularly in conservation. We appreciate it a lot.

For your information, it is most likely that the Corps and the Bureau will be before the subcommittee sometime in early April or May. We will have a much better idea then of the President's budget, and the details will be to us sometime between now and April 8, 9, or 12. So we will have a better idea of what the details are going to be.

Next is Don Hughes of Twin Loup.

Mr. HUGHES. Mr. Chairman, we have submitted written testimony, along with a resolution showing unanimous support of our Nebraska unicameral and ask that it would be a part of this testimony, if you will please, sir.

Senator KERREY. Without objection.

Mr. HUGHES. We want to thank you and this committee for your past support and we request consideration of the proposed supposedly $8,288,000 the Bureau of Reclamation has requested for fiscal 1994.

PROJECT HISTORY

A brief history of our organization. The district was organized in 1954. The project was authorized by the Reclamation Act of 1972 that was signed by then President Richard Nixon. First appropriations came in 1975 for a contract for relocation of a road around a proposed dam site. We ended up with about 4 years of litigation before we got into the groundbreaking ceremonies in 1980 on the dam on the Calamus River.

The dam was completed and dedicated the Virginia Smith Dam on July 4, 1986. I believe you were one of our guest speakers at that while you were Governor of our State, sir. The bureau recommended a 3-year filling stage. The first water was delivered, then, to one of our directors, John Hastraba, from the Geranium area on June 24, 1987.

All major contract portions of our project have been awarded. We have two ongoing completions—the Kent diversion which is scheduled for October 1993. I do not see that we have a problem with that. It is a local contractor, Hooker Bros. They have had several jobs with us and done a great job. The other portion is the Fullerton 2 and 3, and it, too, is scheduled for October 1993 completion. Both would carry over into fiscal 1994 for funding.

It looks doubtful at this time, because only about 51 percent of that Fullerton 2 and 3 are completed and nearly 75 percent of our allotted time has been expended. In all fairness to the contractor, however though, we have experienced one of our wettest years, not only during the summer months, but also we had those early snowstorms coming in at Halloween and little if any work completed in the fall. They still decide that they think they can bring it in on schedule, and we are hopeful that they will.

Factors that we have overlooked sometime with this project is the stabilization of the area economy. No. 2 is energy savings. We no longer require fuels—fossils and electricity—to pump from our underground water supply as well as pumping out of the river. We have ground water recharge through percolation through, as well as not requiring the drawdown.

Recreation has been a big issue as far as use of the facilities at the Calamus. Tens of thousands use that facility during the summer months.

Davis Creek, of course, is in the process of recreation area being developed, and that is being developed by our Lower Loup Natural Resource District, with cost-share funding from the Bureau of Reclamation. And that is scheduled for completion in June 1993. The fish hatchery, as we are all aware, is state of the art below the Calamus Dam. It is complete and in operation now.

We are in the process of continuing purchasing and developing riparian wetlands. One of the unforseen benefits of the project was during this excessive runoff of the snow meltdown in March. The Calamus River is running probably 200 to 250 percent full stage. At that particular time, we were about 5 to 5½ feet below full stage, so we diverted the water from the river and took 85 percent of it, and at this point in time we are about 1½ feet from topping out.

We have about 82 percent of the acreage irrigatable in our project are being served at this time. As of January 1993, 91 percent has been completed.

It is with these considerations in mind that we request your continued support to assure us of a timely completion of our project and permitting the Bureau to remove their construction side of the ORD office and relocate in other areas. There are 108 miles of canal systems in our system from Burwell down to Fullerton.

Today, we talked about seeing the light at the end of this dark tunnel. It has been a good number of years. We appreciate all the support we have gotten over this from you folks, both at the local level, at the State level, and through your committees here. Be assured that we would rather see water than light coming out of that end of the tunnel and, hopefully, by next year we will have this thing completed.

I thank you for your time, sir. It is my honor to be here.

[The statement follows:]

STATEMENT OF DONALD E. HUGHES

Mr. Chairman and members of the committee, my name is Donald E. Hughes, President of the Twin Loups Reclamation District. I live in Scotia, Nebraska. I submit this testimony in support of the North Soup Division, and to ask this committee to support funding in the amount of $8,288,000 after Reclamation under financing for fiscal year 1994 so that Project construction may continue.

It is my privilege, not only as the President of the Twin Loups Reclamation District, but as a farmer who now receives irrigation water from the North Loup Division Project, to submit this statement on behalf of the Twin Loups Districts.

The Virginia Smith Dam and Calamus Reservoir have been in operation since the final filling stage was reached in 1988. The Reservoir conservation capacity is now essentially full, which can be said of few western reservoirs today.

Construction of the Davis Creek Dam was completed 8½ months ahead of schedule by Gilbert Central Corporation of Omaha, Nebraska. The second stage of filling took place last summer, and the structure is working very well. The relocated county road in the upper end of the reservoir was also paved during 1992. The third and final stage of filling the reservoir will commence as soon as possible this Spring. Development of recreational facilities on Davis Creek Reservoir is being done by the Lower Loup Natural Resources District on a local/federal cost share basis. Road construction, boat ramp, and access lane work to the recreation area is complete. Recreational development includes extensive fishing access facilities for the handicapped. The opportunities for the handicapped to enjoy this type of recreation are severely limited in our area, and the Twin Loups Districts whole-heartedly supports this unique feature.

The O&M Headquarters and the Calamus Caretakers residence are complete and in use. The purchase of O&M equipment is continuing. Irrigation service to 39,687 acres is now available.

The Distribution portions of the Mirdan and Geranium systems were transferred to the Twin Loups Irrigation District for O&M on January 1st, 1990. The Scotia System was transferred to the District on January 1st, 1991. Irrigation development of lands in all three systems is continuing. A portion of the expenses of operating and maintaining the Virginia Smith Dam, Mirdan Concrete Lined Canal, Geranium Lift Stations, and Power Transmission lines are also transferred to the District as each distribution system is transferred.

Contracts with the Twin Loups Reclamation District for minor construction, and for operation and maintenance on completed facilities are in place and have worked well over the past seven years. This arrangement has allowed the District to start operation and maintenance on the "ground floor" while Federal funds and expertise are readily available. This arrangement also provides people experienced in Operation and Maintenance near the scene of construction, which helps Federal design and construction engineers avoid or correct "impossible to operate" installations. These contracts have proven to be an economical method of operation and maintenance, and the Federal Government does not have to set up a temporary O&M organization.

Construction of the Elba and Fullerton 1 systems was completed several months ahead of schedule. The early completion allowed the priming and testing of these systems to take place in 1992. Strong interest in immediate development of the lands in these systems was demonstrated by the development of 69 percent of the acres during the priming period.

The contract for the construction of the Fullerton 2 and 3 Systems was awarded July 7th, 1991. Construction is 51 percent complete as of January 1st, 1993.

Bids for construction of the Kent Diversion Dam and Canal, the last feature of the North Loup Division, were opened on March 3rd, 1992. The Kent Canal System is essentially complete, with work this season being concentrated upon the diversion structure.

The current schedule projects all construction to be completed in the Fall of 1993 (FY1994), assuming adequate funds are available. In accordance with the terms in Repayment and Water Service Contracts a component of Federal O&M responsibility would continue until January 1st, 1995. It is probable that some work under the Drainage and Minor Construction Agreements will extend into fiscal year 1997.

The Calamus Fish Hatchery construction is complete. This hatchery was cost shared by the Nebraska Game and Parks Commission and they now are operating it. The first production from the hatchery was rainbow trout, walleye and wipers, which were stocked in 1991. Over 41 million fish, fry and fingerlings have been stocked in the Virginia Smith Reservoir. Approximately 545 acres of riparian habitat mitigation lands have been purchased from willing sellers. Our goal is to acquire an additional 150 acres of riparian and wetland habitat by the end of 1993.

As of February 1st, 1993, the North Loup Division is 91 percent complete. In order to progress toward completion of construction we ask this Committee to support the budget request of $8,288,000, after Reclamation under financing, for fiscal year 1994. We sincerely appreciate the Committees past support of our efforts to complete this project. In this regard, Mr. Chairman and members of the Committee, we wish to thank you and request your continued support.

NINETY-THIRD LEGISLATURE FIRST SESSION

LEGISLATIVE RESOLUTION 48

Introduced by Schmitt, 41; Jones, 43; McKenzie, 34

Whereas, the North Loup Division, Pick-Sloan Missouri Basin Program in Nebraska, also known as the Twin Loups Project, has been in existence for forty years, and will provide irrigation and recreation in north-central Nebraska; and

Whereas, this project has had the support of four previous Nebraska Governors and is supported by current Governor E. Benjamin Nelson; and

Whereas, the project is presently about ninety-one percent complete and the final major construction contracts have been awarded; and

Whereas, the remaining money is crucial to the completion of the project and to the storage and use of precious surface water; and

Whereas, eight million two hundred eighty-eight thousand dollars is needed to continue the project; and

Whereas, the majority of the project's cost has already been expended to build the Calamus Dam, the Davis Creek Dam, and the irrigation distribution features.

Now, therefore, be it resolved by the members of the Ninety-third Legislature of Nebraska, First Session:

1. That the Legislature supports the Twin Loups Project.
2. That the Legislature urges the respective subcommittees on Energy and on Water Development of the Appropriations Committees of the United States Senate and the United States House of Representatives to appropriate sufficient funds in the amount of eight million two hundred eighty-eight thousand dollars to continue construction and progress toward completion of the Twin Loups Project.
3. That copies of this resolution be transmitted to Representative William E. Barrett and be presented to the respective Appropriations Committees of the United States Senate and the United States House of Representatives.

PRAIRIE BEND UNIT, NEBRASKA

STATEMENT OF RON BISHOP, GENERAL MANAGER, CENTRAL PLATTE NATURAL RESOURCES DISTRICT

Senator KERREY. Thank you, all of you, for all of your work. It was a lot of fun when Virginia Smith was over on the House side. She was here when I first arrived in 1989 to be able to fight with her on something as we did with Davis Creek in that first year was a great joy, and we will miss her. I appreciate all the work you have done.

Ron Bishop is next.

Mr. BISHOP. Senator, thank you for the opportunity, I appreciate the opportunity of appearing before the committee today. In light of the time and the busy schedule I will summarize, because I have submitted written testimony.

I am here for two reasons. No. 1 is the Prairie Bend project. We have been working with the U.S. Bureau of Reclamation along with a number of other State and Federal agencies on that project for a number of years and we are close to seeing the end of the planning effort on it. The Bureau has already identified a feasible project out there that would address the water and wildlife problems that we have there in the Central Platte Valley.

There is a need, though, to do a supplemental report draft environmental statement. That effort is probably about two-thirds or more completed. That is a cooperative effort between the State Natural Resources Commission, our natural resources district, and the Bureau of Reclamation. In order to finish up that supplemental report it will be necessary for the Bureau of Reclamation to have an additional $75,000. That $75,000 that is needed to be added to the budget for the Bureau of Reclamation would, and, in fact, already has, been matched by the locals. We have more than put up adequate funding to match the Bureau's $75,000 that we are asking to be added so that we can finish up that supplemental report and wind up the planning effort on that Prairie Bend project.

The other item, very quickly, is the U.S. Army Corps of Engineers and their work on the Wood River flood control project at Grand Island. We would hope that the committee would support the funding necessary for the design work that is needed on that project. We barely squeaked by earlier this year in Grand Island from the flood waters at the snow melt time. We only got by because of the efforts of several hundred people out there with sandbags. Had we had another inch or two in the stage of Wood River we would have had water all over the south part of Grand Island. And so we are very anxious to get that project designed and constructed so that we can begin to relax there in Grand Island.

And I thank you for your time.

[The statement follows:]

STATEMENT OF RON BISHOP

My name is Ron Bishop and I am General Manager for the Central Platte Natural Resources District. Our Central Platte Natural Resources District covers part or all of the 10 counties in south central Nebraska that encompass the Platte River and its drainage areas along a 175-mile stretch extending from Gothenburg, Nebraska, on the west to Columbus, Nebraska, on the east.

A number of serious problems and critical needs relating to water exist within our Natural Resources District. The economy of the area and the well-being of the people residing therein is dependent on irrigated agriculture, with the primary source of irrigation water being groundwater.

The groundwater levels, however, have been declining, causing an increase in pumping costs and an accompanying reduction in well production. The current groundwater level declines of up to 25 feet are predicted to increase over the next 20 to 35 years to the point where thousands of irrigated acres will revert to dryland without some kind of a supplemental supply project.

Additionally, the drinking water supply for each and every one of the over 100,000 residents within our Natural Resources District is groundwater, but groundwater quality problems have developed in the eastern half of our District to the point where a number of municipalities have had to abandon wells because the nitrate levels exceeded the U. S. Public Health Service's published maximum safe level for human consumption.

The area is also subject to infrequent but severe flooding. The single flood event of June 1967 caused over $30,000,000.00 worth of damage in the eastern half of our Natural Resources District alone.

In addition to those three major problems, there are also some other needs related to water within our area.

First of all, there is a need to maintain adequate habitat for the waterfowl, fish and wildlife that currently utilize the area. The Big Bend area of the Platte River Basin in Nebraska plays host to several million migratory waterfowl each and every year.

There is also a need within our area for water-based recreation facilities for our residents and the other residents of central Nebraska.

Senator James Exon, Senator Robert Kerrey, the late Senator Edward Zorinsky, former Senator David Karnes, former Congresswoman Virginia Smith, Congressman Bill Barrett and our Natural Resources District, along with several other agencies, organizations, groups, associations and individuals, have been working for a number of years toward getting a water resources project implemented in the area that would resolve those problems and address those needs.

Thanks to the foresight of this committee, we were successful in getting the necessary authorization and funding to enable the U.S. Bureau of Reclamation to conduct a feasibility study on the project area and develop a plan to address the many problems.

To help reduce the Federal expenditure, our Central Platte Natural Resources District transferred $240,000.00 to the Bureau of Reclamation for the feasibility study efforts. In addition to the cost-share funds, there has been an even larger amount provided in in-kind services in the form of research, studies and data collection. These in-kind services have been provided not only by our Natural Resources District and the local sponsors, but also by State of Nebraska agencies and other interested groups.

All of the data from these studies and the other studies conducted by, or with, assistance of other groups, enable the Bureau of Reclamation to progress to the point where the Bureau has now completed a planning report/draft environmental statement (PR/DES) and filed it with the Environmental Protection Agency.

The plan that the Bureau has developed for the Prairie Bend Unit is physically, economically and environmentally feasible and will provide not only the means to resolve the water problems within the Prairie Bend area, but would also provide the means by which to resolve the fish, wildlife and environmental concerns on the Platte River.

Comments were received on the PR/DES and a Summary Report of the Comments and Responses was prepared and distributed to all the commentors and interested parties and agencies.

Major comments received from the sponsors, the Environmental Protection Agency and the State of Nebraska concerned additional analyses of the recharge benefits, which requires re-operation of the computerized groundwater model of the area and inclusion of a comprehensive water conservation alternative, as well as a modified plan omitting some of the more costly components.

The project sponsors supported and were successful in obtaining a $200,000 write-in for the fiscal year 1991 appropriations, with part of the federal funds programmed to be carried over into fiscal years 1992 and 1993. These funds are being used to prepare a Supplemental PR/DES that shows the Project Sponsor's Plan and the State of Nebraska's evaluation of the plan and addresses other major PR/DES review comments (including EPA's) that were received.

Reclamation, the Central Platte NRD and the Nebraska Natural Resources Commission (NRC) entered into a Memorandum of Understanding (MOU) on June 18, 1991, to cover the conduct of an investigation for a Supplemental PR/DES. This effort is being cost shared by the NRD and NRC.

Tasks to accomplish the effort were identified, and responsibilities for each were assigned. The non-Federal costs are cash and in-kind services that amount to more than 50 percent of the total.

The Supplemental PR/DES is currently scheduled to be completed in fiscal 1994. The Sponsors and the Nebraska Natural Resources Commission have the necessary funds and in-kind services to match the requested $75,000.00 appropriation for the Bureau of Reclamation so that the Supplemental Report can be completed.

We feel it is critical that $75,000.00 be added to the federal fiscal 1994 budget to complete these efforts by the Bureau of Reclamation for the Prairie Bend Unit. We would like to request your support and assistance in getting that done.

We would hope that you would all lend your strong individual and committee support so that the Bureau of Reclamation can complete this Supplemental Report/Draft Environmental Statement for the Prairie Bend Unit that we so earnestly need.

Thank you.

ENVIRONMENTAL VERSUS DEVELOPMENTAL INTERESTS

Senator KERREY. Let me ask just a quick question. It probably deserves a longer discussion. But last week, Secretary of Interior Babbit was in California to announce an agreement involving an endangered species of gnat catcher. And the precedent set there, it seems to me, is developmental interests coming together with environmental interests, agreeing that an ecosystem is at stake here and that writing details of an agreement that allows for both development and protection to occur.

I am not, I must confess, not altogether familiar with the details of that agreement, but all six of you understand the difficulty that we have had in Nebraska with relicensing at Kingsley, and I am curious as to whether or not, in reading that, your interest has been piqued as mine has as to whether or not that we might be using on the high plains, that as a model to resolve conflict in some way outside of the court system.

Mr. JESS. Senator, I am like you. I do not know the details of the agreement that was reached in California. It was also intriguing to me to read about it.

We have, of course, with regard to the relicensing, put together a proposal for Governor Nelson that we believe will have a broad base of support. I wish I could report to you that Secretary Babbit's Fish and Wildlife Service agreed. Thus far, they seem less enamored with it than wildlife and irrigation interests in Nebraska. We are hopeful that we can persuade them.

Senator KERREY. Well, you had to get that little argument in there. I appreciate that. I would just make the observation, because it is not often that I get all six of you sitting attentively like this in front of me, so I will abuse you for a little longer.

It just seems to me that we have environmental opportunities as well as developmental opportunities still there. And that if we set the two on parallel tracks that we ought to be able to come up with a way to accomplish both simultaneously.

I think, in particular with the Missouri River mitigation, I could see if we were able to fully fund that that 20 years from now people would say this has not only improved the environmental quality of the Missouri River, but it has improved the economic capacity of it, as well. I mean, I feel the same way about the flyway, although I do not know quite how to get the political side of it done.

I mean, I think the Fish and Wildlife Service is going to need some assistance on the political side, but it does seem to me that there are both environmental and developmental opportunities that we are struggling to accomplish merely because we have not devised a way to resolve legitimate conflict outside of the court. And I am intrigued, and I would just tell you that I am intrigued and perhaps we could discuss it at some later time. I am intrigued by the model that appears to be used in the gnat catcher case out in California.

PREPARED STATEMENT OF SENATOR DASCHLE OF SOUTH DAKOTA

Again, I appreciate your coming to Washington, and mostly, I want to make it clear, I appreciate all the work that you have done in Nebraska with water. Thank you.

I will now call from South Dakota Robert Roberts, Joe Hieb, and Susan Hargens. But before you begin I want to make the statement of Senator Daschle part of the record.

[The statement follows:]

STATEMENT OF SENATOR DASCHLE

Mr. Chairman, thank you for the opportunity to testify today. This panel has always been good to the people of South Dakota, and we welcome the opportunity to make our case to you once again. I will return the favor by being as brief as possible today.

As you well know, it has become fashionable in some circles to label all water projects "pork barrel" projects, whatever their individual merits. The Members of this panel know better. You know that responsible water development is infrastructure investment in its purest form. You know that all of the roads, bridges, airports, and other traditional forms of infrastructure in the world are of little help to a child ill from the water he or she is forced to drink or a small business forced to lay-off its employees because of lack of a reliable source of clean water. Clean water is not an extravagance, Mr. Chairman, it is nothing less than a prerequisite to public health and economic development.

However, for those predisposed to simplistically label every Bureau of Reclamation project a wasteful "pork barrel" project, we ask only that you evaluate our projects on their individual merits. If they listen, they will learn that these projects will meet urgent human needs in the most cost-effective manner possible, with little or no environmental degradation. That does not fit any definition of pork barrel I have ever heard, Mr. Chairman, and we ask your assistance in helping South Dakota families in the following five areas.

First, we ask your help in funding the Mid-Dakota Rural Water Pipeline to help families in 12 counties of my state get clean water for the first time in their lives. The people in this region have no other cost-effective means of obtaining clean drinking water than via a pipeline from the Missouri River, and the alternative to the pipeline is grim. Of the 20 communities in this area, 80 percent currently fail to meet EPA safe drinking water standards, with extremely high levels of sulfates, sodium, coliform bacteria, and even radium. High nitrate levels have even lead to infant deaths from the so-called "blue baby syndrome." We ask your help in addressing this urgent situation.

I am pleased to announce that Mid-Dakota is poised to begin construction in fiscal year 1994, and is requesting $7.9 million to get the work underway. The project has been designed by the same company that worked on the highly successful WEB Rural Water Pipeline, which was constructed ahead of schedule and under-budget. The state has met its initial cost-share obligations, and we are hopeful that the federal government will be able to provide the $7.9 million needed in fiscal year 1994 to initiate construction of the pump station, water treatment facility, and the first main section of pipeline.

The second drinking water project you will hear from is the Mni Wiconi project in South Dakota. After twenty-eight long years of fighting for clean water, citizens in the Mni Wiconi project area are poised to begin constructing a pipeline that will at long last bring Mni Wiconi—the Lakota word for "clean water"—into their homes. Much of that water will be delivered to the poorest county in America on the Pine Ridge Reservation, and all of the water is desperately needed by families currently forced to drink water that cannot begin to meet federal safe drinking water standards.

This Committee has shown its commitment to Mni Wiconi in the past with an appropriation in fiscal year 1993. The state of South Dakota has also shown its strong commitment by meeting the cost-share obligations established in the Mni Wiconi authorizing legislation. To continue to move forward, we request $13.5 million for fiscal year 1994 to construct features on the Pine Ridge Reservation, the water intake, treatment plant, and portions of the main pipeline.

The third project sponsor testifying today is Leo Holzbauer, representing the Lake Andes-Wagner/Marty II irrigation research demonstration project. I am joining Leo in requesting $2.1 million to initiate a 5,000 acre research effort to determine the drainage properties of glacial till soils and treatment methods for elevated levels of selenium in surface waters. Anyone who knows anything about western water policy knows how badly this research is needed, and we ask the Committee's support in moving this vital effort forward.

Fourth, we request $7 million to complete the Belle Fourche Irrigation Rehabilitation project on schedule. Belle Fourche is known as the "granddaddy of Reclamation projects," having been constructed starting in 1904 with shovels and horses. In 1983, we authorized a rehabilitation of the project to help improve its efficiency and safety. This project has gone extremely well, and we ask you support to complete the project.

Fifth, we request $1.5 million to establish the Biological Diversity Trust authorized in last year's Reclamation Projects Authorization and Adjustment Act of 1992. In that Act, Congress directed South Dakota to protect or restore the best examples of South Dakota's biological diversity, and this appropriation will allow that important process to begin.

I will be submitting a detailed funding request for other worthwhile South Dakota projects to the Subcommittee in the very near future. As usual, South Dakota has many important water needs, both under the Bureau of Reclamation and the Corps of Engineers budgets.

Again, I thank the chairman for the opportunity to be here today, and for the Subcommittee's strong support for helping South Dakotans meet their water development needs.

SOUTH DAKOTA WATER RESOURCE PROJECTS

STATEMENT OF ROBERT E. ROBERTS, SECRETARY, SOUTH DAKOTA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES

Mr. ROBERTS. Thank you, Mr. Chairman. I will be very brief. I have submitted written testimony which I would ask that you include in your record.

Senator KERREY. We will do that, without objection.

Mr. ROBERTS. I want to begin by thanking you for the opportunity to testify today, and more importantly, thanking this committee for its past diligence in seeing that the water funding needs in my State have been met. The people of South Dakota appreciate your continuing support.

The most important report I can make to you, Mr. Chairman, is that last Tuesday night, late in the day on the 40th day of a 40-day legislative session, the South Dakota Legislature passed a permanent funding source for water development projects in the State. That action, which is the culmination of an effort that goes back in one sense for the past 10 months and in another sense for the past 40 years, means that the State's share of the major projects as well as the funding for minor projects that we do within the State, is firmly established in statutes.

The effort succeeded, Mr. Chairman, because South Dakotans recognize the importance of water development as a health issue, as an economic development issue, and as a rural development issue.

We are encouraged by the President's economic proposals to stimulate rural America. We have identified and outlined to OMB Director Panetta a list of projects which could be prepared to go in relatively short order, in some instances with additional funding but in many instances, with reduced review periods by the Federal agencies involved. Construction of both the Mid-Dakota rural water system and the Mni Wiconi rural water system can begin in 1993. Last week, Governor Mickelson met with Secretary Babbit and asked for his assistance in reducing the Federal review period so that we can get those projects underway.

But, Mr. Chairman, as important as water development is for economic purposes in our State, it is even more critical in another way. The Mid Dakota rural water system and the Mni Wiconi rural water system will bring clean, pure drinking water to more than 50,000 people in our State. I want to emphasize that these are drinking water projects, not the more traditional Bureau of Reclamation irrigation projects. In some of the areas to be covered by these projects, the drinking water is substandard. In many of the areas there simply is no drinking water and water is currently being transported by truck.

The area to be covered by these two drinking water project systems contain some of the poorest communities in the United States. Several of the counties, which will be covered, for example, by the Mni Wiconi rural system are among the poorest in the Nation. Indeed, Shannon County, SD, on the Pine Ridge Reservation, is the poorest county in the country, with about 63 percent of the persons living on the reservation having incomes below the poverty level.

These are people who deserve our help and they are people entitled to special consideration from the Congress.

So we ask for your support, as we have received it in the past. The details each of the projects are in the written testimony which I have submitted. Again, thank you for your past support and thank you for the opportunity to appear today.

Senator KERREY. You are welcome. It is a pleasure to have you here again.

Senator Daschle, as you know, has been very instrumental in making certain that the Appropriations Committee is aware of what is going on in South Dakota. And I understand the importance of getting a State commitment for funding, as well.

[The statement follows:]

STATEMENT OF ROBERT E. ROBERTS

Mr Chairman and members of the Committee, my name is Robert E. Roberts, and I am the Secretary of the South Dakota Department of Environment and Natural Resources. I want to thank you for this time to testify regarding the water development needs of South Dakota for federal fiscal year 1994 funding. More important, I want to thank the Committee for its past diligence in seeing that the water funding needs in my state have been met. The people of South Dakota appreciate your continuing support.

I am pleased to report, Mr Chairman, that last Tuesday, late in the 40th day of a 40 day legislative session, the South Dakota Legislature passed a permanent funding program for water development in our state. That action, which is the culmination of an effort extending for more than 40 years, means that the state share for these water projects, and for other, smaller, projects within the state, is firmly established in statute. The effort succeeded, Mr Chairman, because South Dakotans recognize the importance of water development, as a health issue, as an economic development issue, and as a rural development issue.

We in South Dakota are encouraged by President Clinton's economic proposals to stimulate rural America. We have identified and outlined in a letter to OMB Director Panetta infrastructure projects that could start construction within 90 to 120 days. The projects outlined could begin construction in this time period if additional federal funding was available or if, in some instances, required review by federal agencies and the Congress could be expedited.

Construction of both the Mid-Dakota Rural Water System and the Mni Wiconi Rural Water System can begin in 1993. Earlier this week, Governor Mickelson met with Secretary of the Interior Babbitt and asked for his support in expediting review of these programs, so that we might begin them at the earliest possible date.

But, Mr Chairman, as important as water development is in economic development, that is far from being the critical reason for our support: The Mni Wiconi Rural Water System and the Mid Dakota Rural Water System will bring clean, pure drinking water to more than 50,000 residents of South Dakota. I want to emphasize that these are drinking water projects, not the more traditional Bureau of Reclamation irrigation projects.

In some of the areas that will be covered by these projects, the drinking water is substandard. In some of the areas, there simply is no drinking water and it is currently being transported by truck.

The area to be covered by these two drinking water systems contains some of the poorest communities in the United States. Several of the counties which will be covered by the Mni Wiconi Rural Water System are among the poorest counties in the nation—indeed, Shannon County on the Pine Ridge Reservation is the poorest county in the country. Nearly two thirds (63 percent) of all persons living on the Pine Ridge Reservation have incomes below the poverty level.

These are people who deserve our help and they are people entitled to special consideration from the Congress.

Mr Chairman, we ask for your support in five areas. The first is support for the Mni Wiconi Rural Water System. The West River Rural Water, Lyman-Jones Rural Water, and the Oglala Sioux Tribe jointly request a federal fiscal year 1994 appropriation of $13.5 million for the Mni Wiconi project. The State of South Dakota supports this funding request level. The committee's past support for this project has been shown by the appropriation of $9.15 million coupled with the state legislatures's appropriation of $2.5 million to complete the environmental and engineering aspects of the project. The Final Engineering Report will combine engineering reports from each of these systems into one final plan for the entire system. This must be submitted to the Bureau of Reclamation for review prior to a 90 day review by Congress. Initial construction of advance features on the Pine Ridge Reservation, design for the water intake structure, treatment plant and some of the main pipeline would be accomplished with 94 appropriations.

As I noted before, Mr Chairman, this project will serve some of the poorest people in the United States, people who, in many instances, currently have no access to water other than by hauling it by truck.

Second, we ask your support for the Mid-Dakota Rural Water System, which received Congressional authorization last year. Much of the water in the Mid-Dakota region—currently being used by 30,000 people—exceeds the safe drinking water standards for a number of elements. These unsafe levels pose a serious threat to public health. The service area for Mid-Dakota is about 7,000 square miles, covering 12 counties in the state, an area about the size of New Jersey.

The state legislature appropriated $1.5 million last year that is being used to complete engineering reports and design plans and specifications. This year Mid-Dakota was appropriated $2.5 million from the state and is requesting $7,991,000 in federal funding for fiscal year 1994. These funds will be used to initiate construction of the pump station, the water treatment facility, the first storage tank and the first section of main pipeline.

Additionally, this request includes $306,000 to construct the Mid-Dakota project features to deliver untreated water to enhance the 320 acre Hyde Waterfowl Production Area, a unit of the National Wildlife Refuge System.

The third activity for which we ask support is the Biological Diversity Trust which was created by Title 32 of the Reclamation Projects Authorization and Adjustment Act of 1992. The Trust will be governed by a Board of Trustees selected by the Governor, our Congressional delegation, and the South Dakota Academy of Science. In establishing the Trust, Congress directed that projects eligible for funding must protect or restore the best examples of South Dakota's biological diversity. We are requesting that Congress appropriate $1.5 million to the Trust so that we may begin the process of protecting South Dakota's truly unique plant and animal ecosystems.

The fourth project is the Lake Andes-Wagner/Marty II research demonstration program, a 5,000 acre research effort authorized to determine the drainage properties of glacial till soils, the effects of irrigation on selenium movement within these soil types, treatment methods for elevated levels of selenium in surface waters, and wetland and wildlife enhancement activities which can be implemented in areas having high levels of naturally occurring selenium. Again, this is not the traditional irrigation project. Research is needed in these areas, not just for South Dakota, but for most of the western United States where elevated levels of selenium exist. South Dakota requests $2.1 million of federal funding to support Reclamation's planning efforts for this research demonstration program.

The fifth funding request that I would highlight is continued funding for the Belle Fourche Irrigation Rehabilitation project. Belle Fourche is one the oldest Reclamation projects. It was constructed between 1904 and 1915 using horses and shovels. The rehabilitation project was authorized in 1983 to restore the reliability of the system, to conserve water by reducing losses, and to increase the operational efficiency and safety of the project. To complete the rehabilitation on schedule in 1995, continued funding at the $7 million level is needed in fiscal year 1994.

Mr Chairman, thank you for allowing this time today. South Dakota will submit additional written testimony when the Administration's proposed budget requests have been released. I anticipate the State's support of Reclamation and Corps operation and maintenance requests for existing federal projects in South Dakota and for ongoing programs and studies. These include the Corps' Section 22 program and several flood control projects that will benefit eastern South Dakota. Reclamation's Technical Assistance to States program has benefited South Dakota as has Reclamation's general investigations efforts on the Black Hills water management study and the Lewis and Clark rural water system.

What you do here, Mr Chairman and members of the Committee, is critical to the future of my state. We appreciate the opportunity to participate in your decision making.

MNI WICONI RURAL WATER PROJECT, SOUTH DAKOTA

STATEMENT OF JOE HIEB, REPRESENTATIVE OF THE OGLALA SIOUX TRIBE

Senator KERREY. The next witness is Joe Hieb and representatives of the Oglala Sioux Tribe.

Mr. HIEB. Mr. Chairman, my name is Joe Hieb. I am director on the Lyman-Jones Water Development District. I have not been before this committee before testifying. I have been working on this project for 28 years. When we started out we had 10 directors; I am the only director left. The last one was buried in February.

So once again, I have to try to emphasize our problem. We have—not only is our water not drinkable, really, but it does not go through the pipes, either. This pipe, in 2 years, has filled up with gypsum. It fills the pipe. The water will not go through it. If you use this kind of pipe [indicating] it rusts, it grows shut. So we have a problem. But the big problem is the health. The water does not pass safe drinking standards.

I had a business on Interstate 90. I am retired now, but the sons have taken it over. When the tourists come through we had to tell them that they could not drink the water because there was not enough rest stops between where we were and Rapid City. The water is that poor, a high-sulfate content.

So about 28 years ago, I took it upon myself at an REA meeting to see why we could not have water like we have REA. If we had water, western South Dakota would be just as progressive as any other area in the United States. We are asking this year for $13.5 million. We are started. Our project is started. We have had enough funding now so that we have our final engineering report done. We feel that with the $13.5 million that we are asking for for next year that we can get some pipe in the ground, finally.

We appreciate all the help that these committees have given us and we appreciate all the help you are going to give us in the future, because it is critical to us to have at least good drinking water. We do not ask for any more.

Thank you for your kind consideration.

Senator KERREY. Joe, I thought you were going to do a Drano ad there with those things. I appreciate what you have done, as well, in South Dakota.

[The statement follows:]

STATEMENT OF JOE HIEB

Project authorization and funding review

Public Law 100–516 (100 Stat 2566), enacted by Congress in October 1988, authorized $87.5 million ($105 million with cost indexing through October 1992) for rural water systems in South Dakota as summarized below:

Service area	January 1987	October 1992	Federal percent
Federal funds:			
Oglala Sioux	$65,000,000	$78,000,000	74.3
Layman-Jones	11,250,000	13,500,000	12.9
West River	11,250,000	13,500,000	12.9
Total	87,500,000	105,000,000	100.0

Service area	January 1987	October 1992	Federal percent
Cost share	12,500,000	15,000,000	14.3
Total	100,000,000	120,000,000	114.3

Combined request for fiscal year 1994 funds

The Oglala Sioux Tribe, Lyman-Jones and West River rural water supply systems have reached agreement to seek $13.5 million in Fy 1994 funds. The Bureau of Reclamation agrees that the service areas have capability to effectively utilize the funds requested. This is the first year of construction fund requests. This year will begin the ten year maximum construction period provided by Public Law 100–516.

Last year we consulted with the Commissioner of Reclamation and agreed that a request for construction funds would be better supported in fiscal year 1994 than in fiscal year 1993. Planning is nearing completion, and we are prepared to begin construction of facilities that will bring safe and adequate drinking water to the Pine Ridge Indian Reservation and the West River/Layman-Jones service areas. The following is a summary of the funding requests by service area.

Fiscal year 1994 funding request

Service	
Oglala Sioux	$10,044,000
Layman-Jones	1,728,000
Total	13,500,000

All of the requested funds will be used to construct pipelines, pumping stations, reservoirs and other facilities within the respective service areas. As much as $1.3 million of the funds for the Oglala Sioux Rural Water supply system may be used in the core system outside the Pine Ridge Indian Reservation. The balance of the funds will be used within the Reservation. Part of the pipeline system between Wanblee in the northeast corner of the Reservation and the village of Pine Ridge in the southwest corner of the Reservation will be constructed. The interim water system in the White Clay and Wakpamni Districts, where need for water is critical, will be concluded. Much of that system was constructed with Fy 1993 funding provided by Congress.

Employment of tribal members will continue in design, construction, operation and maintenance of the project. Existing public water systems will be upgraded and incorporated into the Oglala Sioux Rural Water supply System.

The West River and Lyman-Jones rural water systems will use appropriated funds to build projects in the Creighton, Wall, Murdo and Vivian areas.

Rosebud Sioux and Lower Brule Sioux rural water systems

Public Law 102–575 provided for a feasibility study to include the Rosebud Sioux Tribe in the Mni Wiconi Project. The feasibility study has now been complete and confirms the needs of the Rosebud Sioux Tribe. Parts of the Rosebud Sioux Indian Reservation are located in Mellette and Todd Counties. The Lyman-Jones rural water system has preciously provided for non-Indian service in parts of Mellette County. Extension of the Mni Wiconi Project in Todd County and expansion into Millette County to serve the Indian population is an addition to the project wholeheartedly supported by the sponsors, namely the Oglala Sioux Tribe, Lyman-Jones and West River.

Similarly, the Lower Brule Sioux Tribe is seeking to create a separate water service area within the Lower Brule Indian Reservation to serve its membership. Part of the Mni Wiconi Project in the Lyman-Jones service areas provides for a pipeline system serving non-Indians in parts of the Lower Brule Indian Reservation. All parties to the project support inclusion of the Lower Brule Indian Reservation in the project. The inclusion of Rosebud and Lower Brule substantially decreases the cost per capita of the project.

The Oglala Sioux has agreed to delay construction of the core system of the Oglala Sioux Rural Water supply System (portion between the Missouri River and Pine Ridge Indian Reservation) until the end of fiscal year 1994 in order to provide Congress the time it needs to consider amendments to Public Law 100–516 to enlarge the core of Oglala Sioux Rural Water Supply System in order to meet the full needs of the Pine Ridge, Lyman-Jones and West River rural water systems and incorporate Rosebud and Lower Brule into the Mni Wiconi Project. The Lyman-Jones and West River rural water systems also concur in the schedule.

Therefore, in fiscal year 1994, construction on the core of the Oglala Sioux Rural Water Supply System will be limited to facilities that will not require re-sizing if the full needs of the project, including Rosebud and Lower Brule, are accommodated through amended legislation.

Final engineering report and NEPA compliance

Testimony was provided last year that the Bureau of Reclamation would provide the design and construction of the core of the Oglala Sioux Rural Water Supply System (between the Missouri River and Pine Ridge Indian Reservation). Following that testimony, the Bureau of Reclamation determined that it could not perform those functions, and all parties agreed that the Oglala Sioux Tribe would take the lead role in the development of the Final Engineering Report and environmental documents for the Mni Wiconi Project. The Engineer for the Oglala Sioux Tribe subcontracted part of the planning to Lyman-Jones and West River in order to provide them with review and coordination opportunities. The Bureau of Reclamation has provided oversight of the preparation of the Final Engineering Report and NEPA documents. This relationship worked to the mutual satisfaction of all parties.

In August 1993, the Oglala Sioux Tribe developed a work plan for completion of the Final Engineering Report and NEPA Documents. Public Law 100–516 requires the following: "The Secretary shall not obligate funds for the construction of the Oglala Sioux Rural Water Supply System until (1) the requirements of the national Environmental Policy Act have been met; and (2) a Final Engineering Report has been prepared and submitted to the Congress for a period of not less than ninety days."

The provision cited above for the Oglala Sioux Rural Water Supply System also applies to the West River and Lyman-Jones rural water systems.

The schedule of the Oglala Sioux Tribe (agreed upon by all parties) provides for delivery of the Final Engineering Report to Congress by July 1, 1993. By October 1, 1993, the Final Engineering Report will have resided with Congress for ninety days. If the Final Engineering Report is acceptable to Congress, the requirements of Public Law 100–516 for the start of construction on the Oglala Sioux Rural Water Supply System and West River/Lyman-Jones rural water systems will have been met. All parties are capable to begin construction with fiscal year 1994 funds.

Progress and project benefits

Confidence in the project continues to grow on the Pine Ridge Indian Reservation. More of the tribal membership is placing confidence in the benefits that Public Law 100–516 will provide. The principal factor in growing project support is agreement among all water systems that the Sioux Tribe will plan design, construct; operate and maintain the Oglala Sioux Rural Water Supply System between the Missouri River and Pine Ridge Indian Reservation, as well as within the Reservation.

During fiscal year 1993, the Oglala Sioux Tribe entered into a cooperative agreement with the Bureau of Reclamation that placed the Tribe in the lead role for planning of the Final Engineering Report and NEPA documents for the Mni Wiconi Project. The West River and Lyman-Jones rural water (as well as Rosebud) entered into cooperative agreements with the Bureau of Reclamation that provided the opportunity and responsibility for peer review and coordination with the Tribe. Three drafts for the Final Engineering Report and NEPA documents were produced between November 5, 1992, and March 8, 1993. All parties participated in the review of the Tribe's work in this regard. These documents are nearing their final completion, and will be presented to Bureau of Reclamation for final review and approval. The documents are scheduled for delivery to Congress by July 1, 1993. The Tribe has stayed within the budgets established for this effort and has met the schedules. All parties concur in the contents of the planning and environmental documents.

The anticipation of safe and adequate drinking water in the White Clay/Wakpamni districts of the Pine Ridge Indian Reservation is high. Last year this committee appropriated sufficient funds to undertake an interim water project to bring safe and adequate drinking water to over 100 homes that presently hauled water for part or all of their needs for drinking, cooking and general sanitation. For many of these homes, water is hauled and stored in buckets. One of the basic necessities of the life assumed available to everyone in this country at the close of the twentieth century has been not available to members of the Oglala Sioux Tribe in the White Clay and Wakpamni districts.

The Oglala Sioux Tribe has completed the final design and environmental documents required for construction of the interim project. Part of the construction project has been advertised, and the balance of the initial project will be advertised and awarded by the first of June 1993. The project will be completed during the 1993 construction season. The tribal membership in this area and the Tribal Council express their gratitude to the Subcommittee for making this project possible at an early date. The improvement in the quality of life for the affected tribal members is of considerable importance to their health and to the dignity of all concerned.

It is underscored here that the quality of water in the West River and Layman-Jones area is extremely poor. Public and private wells that penetrate the geologic formations underlying this area are short-lived due to the poor quality of water and the meager supply. The development of a rural water system for Layman-Jones and West River will have greater impact than the development of electrical distribution systems in the 1930's. There is full support by the Oglala Sioux Tribe for the construction funds requested by the West River and Layman-Jones service areas.

Employment

The 103rd Congress is proposing to develop an effective economic stimulus program to create jobs. Senator Biden's Senate Bill 12 is proposing a $20 billion economic stimulus program to simultaneously develop infrastructure, such as roads, schools, bridges, water, sewer systems, health and public safety facilities, and jobs.

The Energy and Water Development Subcommittee has recognized the need for economic development on the Pine Ridge Indian Reservation and throughout southwestern South Dakota as early as 1988 when Public Law 100–516 was enacted. The appropriations in the amount of $13,500,000 in fiscal year 1994 will assist in the creation of jobs intended by the Subcommittee in 1988. On the Pine Ridge Indian Reservation where income levels are the lowest in the nation and unemployment is the highest, this project brings a new spirit of hope. With all service areas (Pine Ridge, Lyman-Jones, West River, Rosebud and Lower Brule) about 200 jobs will be created. When the project is fully constructed and in operation, 75 jobs will be created.

The parties respectively submit their deepest appreciation for the action of the Subcommittee to fund this most important project in fiscal years 1990–1993, years that the Administration did not provide funding in its budget to Congress. We look forward to the possibility that this Administration may provide construction funding in its fiscal year 1994 budget.

MID-DAKOTA RURAL WATER SYSTEM, SOUTH DAKOTA

STATEMENT OF MS. SUSAN HARGENS, CHAIRWOMAN, MID-DAKOTA RURAL WATER SYSTEM

Senator KERREY. Susan Hargens is our next witness.

Ms. HARGENS. Thank you, Mr. Chairman. I have with me Bruce McCollom, who is our engineer. Also we have five other directors with us today.

My name is Susan Hargens. I am chairman of the Mid-Dakota Rural Water System and I would like to thank you for giving me the opportunity to submit testimony for our request for appropriations in the fiscal year 1994 Energy and Water Development appropriations bill.

The Mid-Dakota project was authorized in October 1992 in Public Law 102–575. The financial package authorized with the project was an $85 million Federal grant, a $15 million Federal loan, and a State cost-share of $8.4 million. The $7.991 million appropriations that will be spent will be spent on design bid opening and beginning construction on the Oahe pump station, the Oahe treatment plant, water storage tanks, the raw water pipeline, north main pipeline to Blunt and Highmore, and the control system.

The Mid-Dakota project covers 7,000 square miles in 10 central South Dakota counties. The project will pipe treated Missouri River water to rural homes, pasture sites, businesses, and communities through over 2,700 miles of buried pipe. Over 2,600 rural water users and 24 cities and small communities are involved, representing a population of about 30,000 residents and over 577,800 head of livestock.

The major sources of domestic water for rural homes as well as the communities in the Mid-Dakota area are wells that are drawn from the Dakota sandstone aquifer and a variety of smaller alluvial or glacial-deposited aquifers. Water from the Dakota formation is generally not acceptable for household use because of high concentrations of total dissolved solids, sodium, and sulfates. Shallow wells many times have become polluted with nitrates and bacteria. Small communities will have a hard time conforming to the safe drinking water standards.

Rural residents do not treat their water, yet they are drinking from the same sources as are the communities around them. Many are unable to test their water because of the expense of having it done.

There is strong support for the Mid-Dakota project at the local, State, and Federal level. On the local level, the Mid-Dakota District who levies taxes on the area that benefits from the project has cosponsored the project with financial and staff support. Their total contribution up to January 1993 has come to $310,000. The On-Hand Economic Development Corp. donated 5½ acres of land and a 17,600-square-foot building near the city of Miller to house the office and the O&M facilities. They also presented Mid-Dakota with a $25,000 grant and a $50,000 loan at 3-percent interest. The State legislature has appropriated $2.5 million for fiscal year 1994 during their last legislative session, bringing the State's total appropriations to $4,370,000.

Mid-Dakota has begun its final hookup campaign and the deadline has been set for June 1. The current dollars taken in from signups have come to $215,625; $89,000 has already been collected from good intention fees.

For the record, I am submitting my full written testimony, a schedule of our planned preconstruction activities, our project time schedule, cashflow projections for fiscal year 1994, facts from our brochure, and additional testimonies.

Speaking for the 30,000 people that stand to benefit from the Mid-Dakota project, we truly need this system for health reasons and for the stabilization and growth of our rural economies. We need your help in making the Mid-Dakota rural water system become a reality and respectfully ask you for your support in the fiscal year 1994 Energy and Water Development appropriations bill. Thank you.

I would also like to make a little comment. Dr. John Carr, who is a member of my board, has written testimony that I am submitting. And one comment that he has in there, I would like to relate to you.

If one would drink the recommended amount of water—that is 64 ounces—they would ingest 3 pounds, 2 ounces of mineral, or literally rocks, per year. And I have here a 3 pound, 2 ounce rock to show you what they would be ingesting.

Thank you.

Senator KERREY. Thank you all very much.

[The statement follows:]

STATEMENT OF SUSAN HARGENS

Mr. Chairman and members of the committee:

I am Susan Hargens, chairwoman of the Mid-Dakota Rural Water System. I would like to submit testimony for our request for appropriations in the FY 1994 Energy and Water Development Appropriations Bill. The Mid-Dakota Rural Water System was authorized in October 1992 in Public Law 102-575. The financial package authorized for Mid-Dakota included an $85 million federal grant, a $15 million federal loan, and an $8.4 million state cost-share. The authorization is indexed for inflation.

The state legislature has appropriated money for the advancement of the project as follows: In 1988, the project received $100,000; In 1989, the project received $50,000; In 1990, the project received $75,000; In 1991, $145,000; In 1992, the project was appropriated $1,500,000 and this year this year the state legislature has appropriated $2,500,000 for a total of $4,370,000 appropriated by the state of South Dakota. Much of this money has been spent to do groundwork for the project.

A Reconnaissance Level Study and Feasibility Study have been completed. The Supplemental Design Report has been completed and accepted by the U.S. Bureau of Reclamation. A Draft Environmental Assessment Report has been completed, Environmental Review meetings have been held, and a final Environmental Report is in progress. In January 1993, we adopted our rate schedules and rules and regulations. The site surveys have been completed for the first phase facilities which are 45 miles of pipeline, the water treatment plant, pump stations, and water storage tanks. Work has begun on subsurface investigations on first phase facilities and plans and specifications for the Oahe pump station and water treatment plant is 10% complete. Preparation and specifications for the Highmore tower is 42% complete and the raw water pipeline and north main pipeline to Highmore is 35% complete. Work has begun on the Final Engineering Report and work on the identification and processing of permits and R/W Authority for the first phase of the project is 25% complete. A state of South Dakota Water Right permit has been applied for and an archeological investigation of first phase facilities has been completed by the U.S. Bureau of Reclamation. A Water Conservation Program has been developed and implemented in the system rate schedules and rules and regulations. A draft of the report for that program is under review by the U.S. Bureau of Reclamation. We have approved our contract forms for the towns and those forms are before the Bureau of Reclamation also.

This year, we are asking the federal government for $7.991 million. This appropriation, along with state and local appropriations will be spent on design, bid opening and beginning construction on the Oahe Pump Station, the Oahe Water Treatment Plant, water storage tanks, the raw water pipeline, north main pipeline to Blunt and Highmore, and the control system. The appropriations would also be used toward design and bid opening on the north main pipeline to St. Lawrence and town system improvements.

The area served by the proposed Mid-Dakota Rural Water System covers over 7,000 square miles in ten central South Dakota counties. The project will pipe treated Missouri River water to rural homes, pasture sites, businesses and communities through over 2,700 miles of buried pipe. Since the Mid-Dakota Rural Water System, Inc. was incorporated in late 1987, over 2,600 rural water users and 24 cities and small communities have paid good intention fees to show their interest in participating. These sign-ups represent the population to be served at around 30,000 residents and over 577,800 head of livestock.

The major source of domestic water for rural homes as well as communities in the project area is derived from poor quality ground water drawn from the Dakota Sandstone Aquifer and a variety of smaller alluvial or glacial-deposited aquifers. Water from the Dakota formation is generally not acceptable for household use because of high concentrations of total dissolved solids, sodium, and sulfates. Water from the shallow aquifers, when considered for household use rate from marginal to poor with high concentrations of total dissolved solids, iron and hardness. Reliance on this poor quality water imposes a continuing regional economic burden in addition to health related concerns. When looking at the 24 communities that are currently signed up only 11 provide a form of water treatment. Of these 11 communities, 5 use chlorination, 2 provide softening, 2 provide fluoridation, 1 provides filtration and 1 provides chlorination, softening and fluoridation. Despite treatment of the water, only one community that will be participating in the system has a water supply that meets federal standards. This community gets its water from the Missouri River. Utilizing an Army Corps of Engineers's ranking system of good, fair, poor and bad, 5 communities ranked fair--indicating that the water meets all of the federal and state primary drinking water standards. However, one or more of the federal standards for nuisance or secondary items is exceeded. 4 communities ranked poor--indicating one or more primary water quality standards may not be met in the water supply and/or excessive levels of nuisance contaminants exist. This water should not be used as a drinking source. And 7 towns ranked bad--indicating that this water could have detrimental side effects on the individuals using it. This water supply is not recommended to be used as a source of potable water. The water does not meet one or more primary drinking water standards and/or has excessive amounts of sulfates, hardness, or total dissolved solids above the upper maximum limit recommended for human consumption.

The quality of the existing private facilities used by the farms and rural residences is not as thoroughly monitored as is the water supply in communities. Generally though, it is believed that the chemical quality of private supplies is similar to that of public supplies. The water supplies are high in iron, manganese, sodium, sulfate and total dissolved solids. These high mineral levels cause health problems in humans including diarrhea, digestive complications, and high blood pressure, which can lead to strokes, heart diseases and kidney disease. People on low sodium diets must install costly distillation equipment or purchase bottled water. Many people with very young children also use distilled water for health reasons. The poor water quality causes stress on livestock resulting in reduced milk production, weight loss, dehydration, and in many cases death in young livestock.

In addition to the high mineral levels, a review of the water quality tests from individual wells within the project area confirms a high occurrence of excessive nitrate levels and bacteria. 42% of the private wells tested exceed the recommended levels of bacteria and nitrates. This is of particular concern as farm wells are not tested as regularly as are public supplies.

Earlier I had mentioned livestock figures because agriculture is the predominant source of income in this rural section of the state. Farmers and ranchers in the project area use existing surface water supplies for their livestock. Primary sources for their water supplies are stock dams or dugouts which can be good during years of normal or above normal run-off. The run-off which fills these sources traverse an agricultural area and is contaminated by animal waste and other organic pollutants. Stock dams and dugouts can be a hazardous source of water, not only because of the water quality, but because of other factors as well. During the winter months, ice forms on the surface and must be chopped daily for livestock access. The livestock occasionally fall through the ice and drown. Livestock also run the risk of becoming bogged in the mud and dying when the water levels are low in the summer months.

The Mid-Dakota project is considered a high priority project by the South Dakota Department of Environment and Natural Resources and is listed in Governor Mickelson's Water Initiative in the short term category.

The Mid-Dakota Water Development District has co-sponsored the project with financial and staff support amounting to the sum of $310,000 up to December 1992. The taxes levied by the District come from the area that will be served by the Mid-Dakota Rural Water project.

This year, On-Hand Economic Development Corporation made a donation of 5½ acres of land and a 17,600 square foot building by the city of Miller for use as a permanent office and operations and maintenance center. The value of the property is estimated at $200,000. They also provided a grant of $25,000 to use to renovate the office and a 3% loan of 50,000.

The final hook-up campaign for the Mid-Dakota Rural Water System has begun and the deadline has been set for June 1st. We have just completed our informational meetings and have already taken in $205,625 from sign-ups. Trained volunteers are now getting ready to contact those who haven't signed up as yet. We feel confident that we can have a sufficient number of sign-ups by June 1st to proceed with execution of a repayment agreement. There is a lot of support from the people in the area and many have stated to me "I think the project should have been built yesterday". So many of the people need the water-NOW!

A unique provision included with Mid-Dakota's authorization is a Wetland Development and Enhancement Component. An appropriation of $306,000 is included in our request for appropriations. In conjunction with various federal, state and local agencies, the Mid-Dakota sponsors put together a proposal that will enhance, restore, create and maintain wetland areas. The use of both treated and untreated Missouri River water is envisioned to enhance wetland acres.

The Mid-Dakota Rural Water System represents a contemporary water project designed to alleviate a regional water supply problem. The project has been developed due to the cooperation of a diverse group of interests that include, but are not limited to the local residents, state and federal officials, water interests, public power interests and wildlife groups. All these groups may seem to have different interests, but to survive in rural America in the 90's, we must learn to compromise a little and recognize and accommodate the other person's needs. This can be seen in the agreement that was reached between Mid-West Electric and the Mid-Dakota project. Under the agreement, the project will utilize low-cost Pick-Sloan pumping power for six months of the year.

In conclusion, the Mid-Dakota Rural Water System is the most feasible solution to a situation that demands immediate attention. The Safe Drinking Water Act will impose a heavy burden on the communities who will not be able to comply with the stringent requirements for their water quality. Rural families must deal daily with water quality and quantity problems. Many are drinking water that could be very damaging to their health. Young livestock die from water induced scours which is brought on by inferior quality water.

Mid Dakota has strong support on local, state and federal levels through their efforts to work with diverse groups to come to a solution that is palatable for everyone involved. To date, financial support from local, state, and federal levels have been: $205,625 from hook-up fees, $89,000 from good intention fees, $310,000 from the Mid-Dakota Water Development District, $225,000 from On-Hand Economic Development, $4,370,000 from state of South Dakota, $50,000 from the federal government. Mid-Dakota is ready to go and could begin construction early next year providing we receive the necessary federal funding.

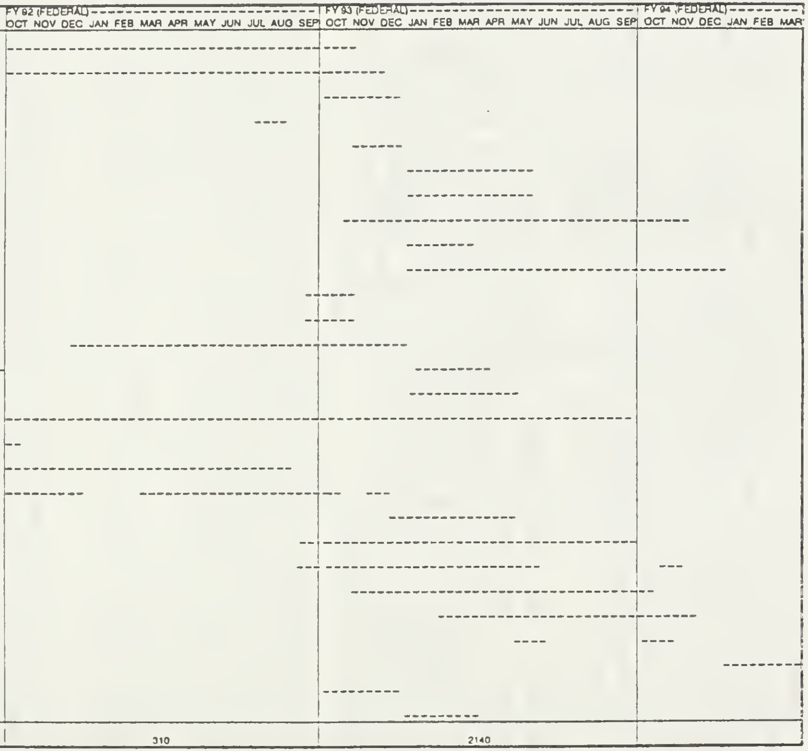
For the record I am submitting my full written testimony, a schedule of our planned pre-construction activities from October 1991 - March 1994, our project time schedule and cash flow projection for FY 1994, the fact sheets that composed our latest brochure and individual testimonies from town officials and local residents. Speaking for the 30,000 people that stand to benefit from the Mid-Dakota project, we badly need this system not only for health reasons but also for the stabilization and growth of our rural economies. We need your help in making the Mid-Dakota Rural Water System become a reality and respectfully ask you for your support for a $7,991,000 write-in in the FY 1994 Energy and Water Development Appropriations Bill. Thank you.

MID-DAKOTA RURAL WATER SYSTEM

SCHEDULE OF PRE-CONSTRUCTION ACTIVITIES OCTOBER 91 – MARCH 94 FY 93 $ (1)

SHEET 1 OF 3
BARTLETT & WEST ENGINEERS, INC.
REVISED DECEMBER 4, 1992 (AND JANUARY 25, 1993)

ACTIVITY		COST ($1,000)
CONGRESSIONAL AUTHORIZATION		3
ADOPT RULES & REGULATIONS (2)	(2)	8
PLAN SIGN-UP EFFORT	(3)	7
REVIEW ENGINEERING AGREEMENT AMENDMENTS		2
SITE OPTIONS & RIGHT TO TEST BORE	(4)	7
RURAL SIGN-UP EFFORT	(5)	21
NEGOTIATE CONTRACTS WITH TOWNS		8
OBTAIN SITES & EASEMENTS FY 93		33
OBTAIN WATER RIGHT		2
NEGOTIATE REPAYMENT AGREEMENT	(6)	3
CULTURAL RESOURCE MANAGEMENT PLAN	(6)	1
ARCHAEOLOGY INVESTIGATION FY 93	(6)	1
COMPLETE ENVIRONMENTAL ASSESSMENT	(6)	1
FINDING OF NO SIGNIFICANT IMPACT	(6)	----
CONGRESSIONAL APPROPRIATION FY 94		17
PROJECT MANAGEMENT, RW, ENVIRONMENT WORK, MISC. (8) (8)		298
STUDY GETTYSBURG WATER SOURCE (8) (9)		14
PRELIMINARY DESIGN FY 93 FACILITIES (8) (9)		54
SURVEY FY 93 FACILITIES (8) (9)		160
SUBSURFACE INVESTIGATIONS FY 93 FACILITIES (8)		78
PLANS & SPECS. FY 93 WTP & PS FACILITIES (8)		600
PLANS & SPECS. FY 93 PIPE & TANK FACILITIES (8)		309
FINAL ENGINEERING REPORT PREPARATION (8)		236
USBR REVIEW FINAL ENGINEERING REPORT	(6)	----
USBR REVIEW PLANS & SPECS	(6)	----
FINAL ENGINEERING REPORT TO CONGRESS		----
DEVELOP WATER CONSERVATION PROGRAM	(7)	----
SECRETARY APPROVAL WATER CONSERVATION PROGRAM		----
TOTAL	(10)	2998



MID-DAKOTA RURAL WATER SYSTEM
TENTATIVE PROJECT TIME SCHEDULE AND CASH FLOW PROJECTION FY 94 $(1)
TIME FRAME COMPARABLE TO WEB

SHEET 2 OF 3
BARTLETT & WEST ENGINEERS, INC.
REVISED DECEMBER 4, 1992 (& JANUARY 25, 1993)

PROJECT FEATURE	COST ($1,000)	FISCAL YEAR (FEDERAL)							
		92	93	94	95	96	97	98	99
OAHE PUMP STATION	735	D	DDDDDDDDDDDD	(7) DDDDDBBCC163	CCCC490CCCCC	82			
OAHE WATER TREATMENT PLANT	11812	D	DDDDDDDDDDDD	(7) DDDDDBBC2054	CCC4879CCCCC	4879CCCC			
BOOSTER PUMPING STATIONS	622					DDDDDDDDDDDB	BCCC249CCCCC	CCC124CCCCCB	BCCC249CCCCC
WATER STORAGE TANKS	4827	D	DDDDDDDDDDDD	(8) DDDDDBBCC500	CCCC830CCCCB	BCCC300CCCCB	BCCC1700CCCC	DDDDD680DDDB	BCCC817CCCCC
RAW WATER PIPELINE	932	D	DDDDDDDDDDDD	(8) DDDDDBBCC621	CC311				
NORTH MAIN PIPELINE TO BLUNT	5748	D	DDDDDDDDDDDD	DDDDDBBC2090	CCCC3658CCCC				
NORTH MAIN N PIPELINE TO HIGHMORE	5748	D	DDDDDDDDDDDD	DDDDDBBC2090	CCCC3658CCCC				
NORTH MAIN PIPELINE TO ST. LAWRENCE	6408			DDDDDDDDDDDB	BCCCC3204CCB	BCCCC3204CCC			
NORTH MAIN PIPELINE TO HURON	7740				DDDDDDDDDDDB	BCCCC5160CCC	CCCCC2580CCC	C	
STEPHAN MAIN PIPELINE	5108						DDDDDDDDDDDB	BCCCCC4086CC	CC1022
GETTYSBURG MAIN PIPELINE	2027					DDDDDDDDDDDB	BCCCC1622CCC	CCC405	
OAHE EAST DISTRIBUTION SYSTEM	2075				DDDDDDDDDDDB	BCCCC1660CCC	CCC415		
BLUNT EAST DISTRIBUTION SYSTEM	2563				DDDDDDDDDDDB	BCCCC2050CCC	CCC513		
HUGHES EAST DISTRIBUTION SYSTEM	1794					DDDDDDDDDDDB	BCCC1435CCCC	CCC359	
HIGHMORE EAST DISTRIBUTION SYSTEM	3798					DDDDDDDDDDDB	BCCC3038CCCC	CCC760	
HYDE DISTRIBUTION SYSTEM	2494					DDDDDDDDDDDB	BCCC1995CCCC	CCC499	
ST. LAWRENCE EAST DISTRIBUTION SYSTEM	2973						DDDDDDDDDDDB	BCCC2378CCCC	CCC595
HAND DISTRIBUTION SYSTEM	2407						DDDDDDDDDDDB	BCCC1926CCCC	CCC481
BEADLE DISTRIBUTION SYSTEM	3558						DDDDDDDDDDDB	BCCC2870CCCC	CCC688
SHARPE EAST DISTRIBUTION SYSTEM	1018							DDDDDDDDDDDB	BCCCCC1018CC
BUFFALO EAST DISTRIBUTION SYSTEM	1588							DDDDDDDDDDDB	BCCCCC1588CC
SANBORN DISTRIBUTION SYSTEM	2519							DDDDDDDDDDDB	BCCCCC2519CC
SPRINGS SOUTH DISTRIBUTION SYSTEM	3042							DDDDDDDDDDDB	BCCCCC3042CC
GETTYSBURG EAST DISTRIBUTION SYSTEM	2701						DDDDDDDDDDDB	BCCCC2181CCC	CCC540
GETTYSBURG SOUTH DISTRIBUTION SYSTEM	4900					DDDDDDDDDDDB	BCCCC392CCCC	CCC980	
	0								
CONTROL SYSTEM	852	D	DDDDDDDDDDDD	DDDDDBBCCCCC	CCCC400CCCCC	CCCCC10CCCCC	CCCC60CCCCCC	CCCC191CCCCC	CCCC191CCCCC
O&M CENTER AND EQUIPMENT	792				DDDDDDDDDDDB	BCCC396CCCCC	CCCC396CCCCC		
TOWN SYSTEM IMPROVEMENTS	341			DDDDDDDDDDDB	BCCCCC69CCCC	CCCCC68CCCCC	CCCCC68CCCCC	CCCCC68CCCCC	CCCCC68CCCCC
SUB-TOTAL CONSTRUCTION	91122			7518	17499	17809	17991	17487	12818
OTHER COSTS	32330	(5) 413	2211	2687	6209	6319	6383	6204	1924
TOTAL PROJECT COSTS SRWS	123452	413	2211	10185	23708	24128	24374	23691	14742
FEDERAL APPROPRIATION RWS	113886	(6) 0	0	7685	21708	22128	23932	23691	14742
NON-FEDERAL	9566	413	2211	2500	2000	2000	442	0	0
WETLAND COMPONENT	2756	0	0	306	0	0	485	665	1300
TOTAL FEDERAL APPROPRIATION	116642	0	0	7991	21708	22128	24417	24356	16042

SHEET 3 OF 3
BARTLETT & WEST ENGINEERS, INC.
REVISED DECEMBER 4, 1992

FOOTNOTES TO PRE-CONSTRUCTION ACTIVITIES FY 93$

(1) Costs for each activity generally include, as appropriate: Staff time/expense, Board per diem/expense, and Legal Services. All FY 93 cost figures are preliminary estimates in October, 1992 $ (i.e., Federal FY 93 - October 1992 thru September 1993).

(2) Includes preparation of camera ready forms as follow: Easement, Water User Agreement, Water User Data Sheet, Declination, Standard Special User Contract, Rule and Regulation Booklet.

(3) Includes printing costs of forms.

(4) Includes payment for land, abstract fees, recording fees, etc.

(5) Includes mileage payments to volunteers.

(6) USBR Costs FY 92/93 covered by $50 thousand general investigations appropriation (not included in $ shown).

(7) Included in "Adopt Rules and Regulations".

(8) This task is Engineering work.

(9) Total costs shown include work done in previous fiscal years (Totals $93 thousand for the 4 tasks).

(10) Includes $248 thousand of eligible development cost from previous fiscal years.

FOOTNOTES TO PROJECT TIME SCHEDULE AND CASH FLOW PROJECTION FY 94$

(1) All cost figures are preliminary estimates in October, 1993 $ (i.e., Federal FY 94 - October 1993 thru September 1994).

(2) DDD is time for design (i.e., preparation of plans and specifications).

(3) BB is time for advertisements, bidding and award of contract.

(4) CCCC is time for construction contract.

(5) Includes eligible Pre-Construction development costs from FY 91 and before $257 thousand.

(6) Does not include $50 thousand general investigation appropriation.

(7) Bid date for Oahe Water Treatment Plant and Pump Station March 31, 1994.

(8) Bid date for 1st Phase Main Pipeline and Highmore Tank March 31, 1994.

MID-DAKOTA RURAL WATER SYSTEM
SUMMARY OF STATISTICS

	Service Area - 7,000 Sq. Miles Paid Good Intention Fees			Water Use				Revenue[6]		
			Peak	Average						
User	Meters	Population	MGD	MGD	MGY	Gal./Unit/Time[3]		$1000/Yr.	$1000 Gal.	$/Unit/Month
Farm & Open Country[1]	2.881	8.072	3.19	1.07	391[2]	15.500[2]		1.573	4.02	56.15
Municipal Household	136	402	0.08	0.02	7	4.200		40	5.88	24.50
Class 1 Towns & Special	19	20.192	4.27	3.07	1.122	142		1.679	1.50	6.49
Class 3 Towns & Special	18	501	0.30	0.12	43	100		99	2.30	7.00
Growth			1.25							
TOTAL	3,054	29,167	9.00		1,563			3,391		

Project System Facilities

1. Lake Oahe Pump Station - 9 MGD
2. Water Treatment Plant & Pump Station - 9 MGD
3. Transmission Pipeline - 228 Miles @ 30 to 12 inch diameter.
4. Storage Reservoirs 5 and Pump Stations - 7
5. Distribution Pipelines - 2,492 Miles @ 12 to 2 inch diameter.
6. System Appurtenances - Pressure Reducing Valves, Control Telemetry, Etc.

Annual Administrative / Operation and Maintenance Cost[6]

1. Salaries and Wages	$ 374.026
2. Utilities	379.500
3. Taxes, Insurance, Fees	144.755
4. Repairs & Maintenance	182.368
5. Chemicals	177.268
6. Fuel, Supplies, Miscellaneous	234.798
TOTAL @ 1.563 MGY	$1.432.715

Development Cost[5]

1. Project Construction	$ 91.112.000
2. Other Costs & Contingencies	32.330.000
3. TOTAL	$123.452.000

Financing Plan[5]

1. Federal Loan	$ 17.080.000
2. State Grant	9.566.000
3. Federal Grant	96.786.000
4. TOTAL	$123.452.000

Notes

1/ Includes 612 Livestock and 75 Seasonal Users

2/ Incluses 21 % Livestock Use on Equivalent 400,000 Head Beef Cattle.

3/ Towns are Gallons per Capita Per Day. Special Users other than towns not included. Others are Gallons Per Hook-up Per Month.

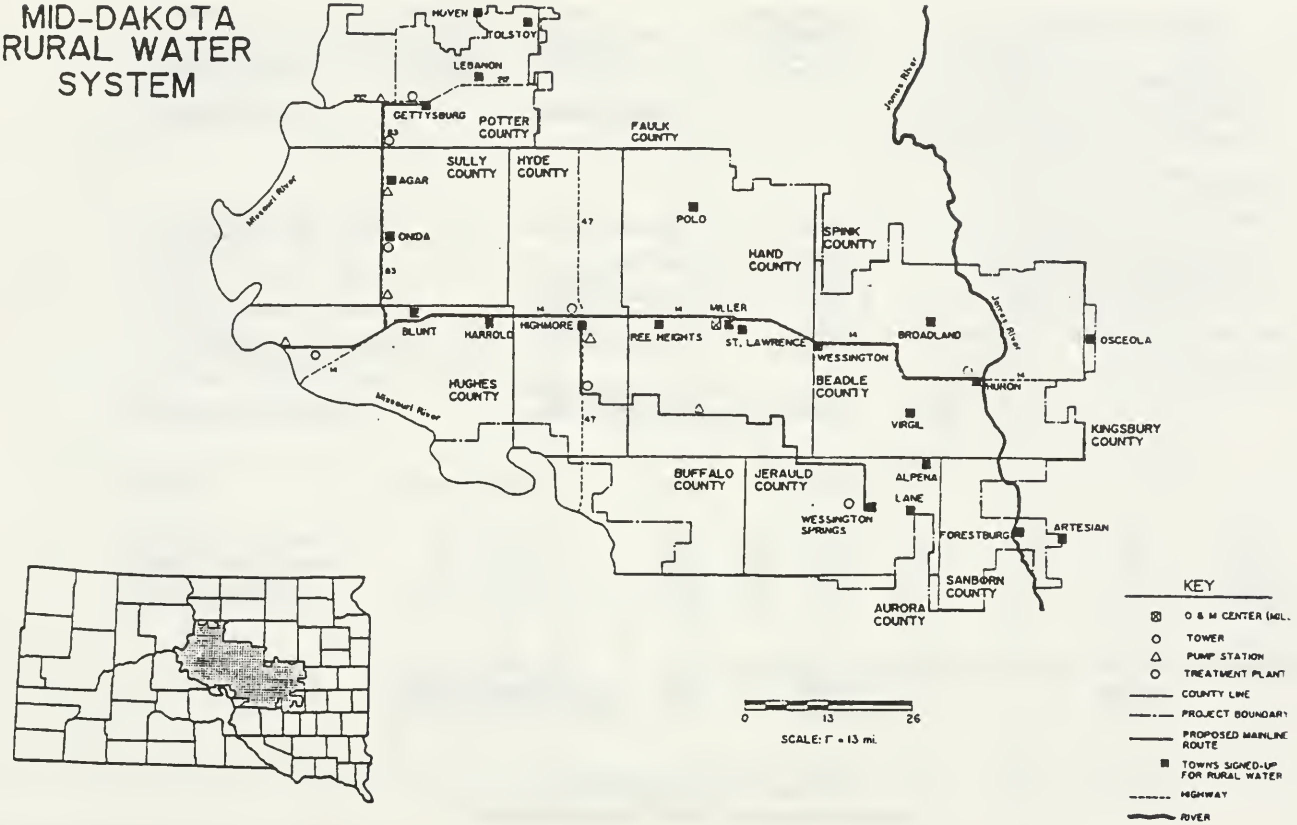
4/ Towns are Dollars per Capita Per Month. Special Users other than towns not included. Others are Dollars Per Hook-up Per Month.

5/ October, 1993 prices. Inflation costs to Time of Completion Not Included

6/ October, 1992 prices. Inflation costs to Time of Completion Not Included

7/ Abbreviations:
MGD - Million Gallons per Day
MGY - Million Gallons per Year

MID-DAKOTA RURAL WATER SYSTEM



STATEMENT OF DR. JOHN S. CARR, MILLER, SD

I respectfully submit the following testimony in support of funding for the Mid Dakota Rural Water System. It is my opinion that this project would provide improved health conditions to the area supplied by the Mid-Dakota Rural Water System.

My name is Dr. John S. Carr. I am a health care provider in Miller, SD. My serving area extends to a major portion of the area which will be supplied by the Mid-Dakota Rural Water System. As a physician I am greatly concerned with the quality of life within my locality. One of our major concerns has been the quality of our drinking water.

As you may know, water is an essential nutrient and a major component of all life on earth. Miller's water, as well as the water from many of the surrounding rural areas, is not fit to consume. In fact due to it's odor, taste and high amounts of minerals, the quality of our water creates a definite health problem.

Due to the high sulfate concentration (1177mg/l) many people suffer from chronic diarrhea. Minerals such as iron, calcium and sodium have been found to be in excess of the EPA standard. The ingestion of minerals such as these will tax the kidneys therefore causing an increase in the amount of chronic bladder infection, elevate blood pressure as well as increase the risk for kidney stones.

At present bacteria and nitrates have not posed a problem in the city of Miller but according to a study of the project areas' rural wells, 42% of the wells tested showed the presence of harmful bacteria. Being an agricultural area, many shallow wells are showing nitrate contamination.

Fluoride contamination has been found in many of the rural wells in the project area. This poses a major health risk as a carcinogen if consumed in high amounts over a period of time.

The unpalatable nature of our water discourages ingestion causing a health risk in itself. Many residents rely on a poor substitute such as carbonated beverages, coffee, etc. to replace their water supply. Without adequate ingestion of water, the entire body becomes stressed and less efficient. Yet if one would drink the recommended amount of Miller water per day (64 oz.), they would ingest 3 pounds 2 ounces of minerals or literally rocks per year.

It is not feasible for each rural community to have their own treatment plant. Plus this would not solve our rural consumers' problems. Mid-Dakota Rural Water System will guarantee a high quality drinking water to a larger consumer at a more affordable price.

On behalf of all the residents of the Mid-Dakota project area, I urge you to support legislation to fund the Mid-Dakota Rural Water System.

STATEMENT OF THE CITY OF MILLER, SD

The requirements placed on small communities for waste water treatment and solid waste disposal have drained the financial resources of these communities. Now we are faced with the increased requirements for safe drinking water. What this is going to mean to Miller and other small communities in the Mid-Dakota area is that we are going to have to build new water treatment plants.

The quality of our water is very poor (water analysis attached). It causes health problems with many people, is very corrosive to fixtures and equipment, is very hard and contains a great deal of dissolved solids along with iron which causes a rust problem.

The Mid-Dakota Rural Water System would not only provide good quality drinking water to the rural areas, but would be an asset to all of the communities in the Mid-Dakota area. Instead of each community having to build a water treatment plant, the Mid-Dakota project with one treatment plant would serve everyone.

The city of Miller's dedication to the Mid-Dakota project is supported by our Economic Development Corp. The city of Miller's Economic Development Corporation has purchased property, outside of Miller, along the proposed main pipeline, consisting of 5.5 acres of land and a 17,000 square foot building that formerly was used as a boat manufacturing factory.

This building is fully insulated, and has office and show room space. This property is being given to the Mid-Dakota Rural Water System to be used as their office and O&M Headquarters. There also is a smaller cold storage building on the side of the property. This property is valued at $180,000 and in addition, the Miller Economic Development Corp. gave them a $25,000 grant to remodel the office to meet their needs and if necessary a $50,000 loan at 3 percent interest. The property value and grant is valued at $205,000. Divided by the 1678 residents of Miller and that equates to $122.17 per person contribution to the Mid-Dakota Rural Water System. The state of South Dakota is appropriating $2,500,000 for the Mid-Dakota project for the next fiscal year. This is a commitment of $3.57 per person from the people of the state of South Dakota for the next fiscal year.

The city of Miller is located in the center of the Mid-Dakota Rural Water System. The city believes a central office and O&M Headquarters in the center of the project would be beneficial.

The city of Miller has made a strong commitment to the Mid-Dakota Rural Water System. The state of South Dakota strongly supports it as well. We trust that the Congress of the United States as well as President Clinton will see the need and look favorably on this project to provide us with a good quality drinking water necessary for the health and economic development of central South Dakota.

STATEMENT OF VIVIAN BAUER, HARROLD, SD

I wish to express my views of why I sincerely hope the Mid-Dakota Water program goes through.

Here, in the little town of Harrold, we constantly battle the very bad water we have. We need to have water softeners, rust removers, and osmosis machines just to begin to drink and use this stuff. My biggest worry is that I really wonder if our health is not seriously affected. And, in a dry year, we have to wonder if we will have any water at all.

It would be wonderful to have clean, healthy and good water and an abundance of it.

STATEMENTS OF CONCERNED CITIZENS OF SOUTH DAKOTA

ARLENE SCHAEFER, HUGHES COUNTY, SD

The rural people of Central SD have a real need for good water. The expense of drilling deep wells, that produce poor quality water, is a concern of most farm families. Then the added expense of equipment such as water softeners, distillers, reverse osmosis machines soon wear out because of the minerals, etc. in the water. Even with the use of these machines the water quality is not satisfactory. A person wonders what reaction the body has to all of this? Can it really be healthful for anyone especially young children? Funding Mid-Dakota can bring peace of mind to Rural SD.

BERNICE GREGG, HUGHES COUNTY, SD

Rural water is needed very badly in our area. Our water comes from a artesian well 2,000 ft. deep and costs $20,000. It is the second well we've had to dig as the first one lasted only two years. It is some of the hardest water our softener dealer has ever worked with. Even after going through a nightly process, with the softener, we can hardly keep faucets on our sinks. After watching how they are "ate up" by this water, what is it doing to our bodies and health? We can't get rural water fast enough.

BEVERLY YOST, MILLER, SD, HAND COUNTY, SD

My name is Beverly Yost and I live in Miller, SD. The water in Miller is very bad. We have to have a filter to help but it is still not very good. It has a very laxative effect on anyone drinking it. It has lots of rust also which is very bad for washing clothes. I am very much in favor of the Mid-Dakota Rural Water System even if it will cost a little more. The benefits will far out-weigh the costs.

We have a mother living out in the country and someone has to haul all her drinking water. I hope you will consider this project. It is very necessary for rural people and small townsfolk in our area.

WARREN PORTER, HYDE COUNTY, SD

At 18 months of age our daughter's twin sons declined water while at a baby sitter's home in Highmore, SD. Without fail, every day when she returned home with them, the first thing they wanted was water. Yes!! The water in Highmore is that bad. It tastes bad and even smells bad. These youngsters had always drunk distilled water at home. Fortunately, all children do not have the misfortune to thirst all day for water, while waiting for a decent glassful at night.

ORVIN BERTSCH, HAND COUNTY, SD

Mr. Bertsch had to dig a new well in 1990 because his two wells were flowing at historically low volumes and did not meet the needs of his cow/calf pairs and hog operation. His new well produces more water but it is still the same quality as the old wells. It is still very hard and rusty.

RANDY AND GWEN JOHNSON, HAND COUNTY, SD

Randy and Gwen have had to dig a new surface well since their former well contained 130ppm of nitrates. They were told by State water quality officials to not drink the water. Their new well is not real good but they can drink the water.

JOHN GROSS, SULLY COUNTY, SD

The Gross' always had an excellent water supply that neighbors for miles around came to drink and haul home. Their shallow well is located in a glacial channel by Joe Creek, which drains the area.

In 1983 a feeder lot located approximately 4½ miles up Joe Creek from Mr. Gross flooded and lagoon effluent drained into Joe Creek. The Gross' water supply developed quality problems due to high nitrates and was declared unfit for human consumption. A treatment system had to be installed at considerable expense to the Gross' and their raw water will probably not be dependably safe again. They are still experiencing the same problems and are still using reverse osmosis in order to drink the water.

KERMIT WULFF, BUFFALO COUNTY, SD

I am writing in regards to our water and the need for Mid-Dakota Rural Water. We have a shallow well here at my place. The water is real hard and does a lot of corrosive damage to our pipes and plumbing. Also a lot of the shallow well water is not fit for human consumption. About 99 percent of the well water in my area is artesian and that is real hard and a lot of it is not good for human consumption.

If there ever was a need for this project it is now. We sure don't want to miss out on this one, or else it looks like this is our last chance. We need it now.

STATEMENT OF DALIN FAST, DAIRY FARMER, EAST-CENTRAL SOUTH DAKOTA

We are located 8 N. & 2½ W. of Iroquois, S.D. Our only water source is a well about 1,000 ft. deep in the Dakota Flow. Due to the high fluoride content we have battled with our dairy—nearly giving up until we found the water was creating a fluoride toxicity in our livestock which in turn suppressed the immune system causing infections in the kidneys, bladder, liver, mastitis, metritis, and many bone fractures. We have lost over 50 Holstein cows in the last 10 years. Plus selling very poor doing animals in large numbers. We also worked with the South Dakota University and Michigan State University which assisted our veterinary in finding the problem. We are currently using a Reverse Osmosis Water System to process all our water. Since installing our new system; Dec. 1, 1992, we have increased our herd production 30 percent with dramatic improvement in herd health—all in a 90 day period. Knowing that a large portion of our community uses very similar water, we have a great concern and distrust of the water. Mid-Dakota Rural Water System will supply water that will greatly enhance the economic stability and progress of our community.

MNI WICONI RURAL WATER PROJECT, SOUTH DAKOTA

STATEMENT OF WAYNE TAPIO, COUNCILMAN, OGLALA SIOUX TRIBE

Mr. TAPIO. Senator Kerrey, I certainly want to thank you for your time this afternoon. I am Wayne Tapio. I am an Oglala Sioux tribal councilman from the Oglala Sioux Tribe from Pine Ridge, SD. We are here this morning to testify before you on the Mni Wiconi project which is shared with Lyman-Jones, Jim, here, who testified before me.

As you are well aware and Senator Daschle's office and Congressman Tim Johnson know, the problems that we have been having with water, with health, and medical problems that come out of not having water and having bad quality water out on our reservation. The Nebraska delegation mentioned that they are seeing the light at the end of the tunnel. Without this project and without further appropriation that we are asking in the amount of $13.5 million to continue with this project, the only light at the end of the tunnel for us is an oncoming train. And it will continue to be that way.

We have completed our final engineering report; we have done everything that needs to be done. We need this $13.5 million appropriated for fiscal year 1994 to continue with this project. And down the line it will take us 10 years which will employ a lot of people on our reservation. During the construction of this project and after its completion there will be a whole lot of people that will have jobs.

But the most important on our reservation now is the water. The water presented to the subcommittee earlier looked bad and we can get some that would make that look good. But we will not do that—or bring that here today. We have a major concern. You did appropriate funding to provide interim supply to White Clay and Wakpamni districts on our reservation to serve 140 families that never had any water at all. And the deep well that Senator Pressler referred to this morning, in some areas, even they do not work, in the corner of South Dakota that we come to right next to your State.

So we are here to thank you, first of all, in this committee, and Senator Pressler and Senator Daschle and Representative Johnson, for all they have done for us thus far. I am here to certainly ask your consideration and every effort you could put forward to move us forward now with this project.

But like Joe Hieb mentioned, for him it has been a long time. It has not been that long for us, but the need is there and the need is great. And all the illnesses and all of the unemployment that we do have out there just leads to that.

I as a councilman, like you as a Senator, have a constituency out there. This is my seventh term, and I talk to people. Recently, I asked an old grandma who was taking care of 11 of her grandchildren, "Now what is the most important thing you want or would want?" And she said, "Wayne, get me water so I could wash my babies, keep them clean and wash their cloths and let them grow." That is what we are asking from you here today.

I want to thank you, Senator Kerrey, for stopping by my house when my boy died a year ago last December. I appreciate that very much.

I want to thank this committee and you, Senator, for everything you have done for us and everything I am sure you are going to do for us in the future. Thank you.

Senator KERREY. Thank you.

Mr. HIEB. Mr. Chairman, may I make one comment?

Senator KERREY. Yes.

Mr. HIEB. In the Mni Wiconi project, we have 95-percent local support signed up memberships. That is how critical our water is to our people.

Senator KERREY. Again, I appreciate your testimony and I appreciate your coming to Washington. Thank you.

TROPICANA AND FLAMINGO WASHES, ARIZONA

PREPARED STATEMENT

Before we end, I understand that the last witness, Virginia Valentine from Clark County, NV, could not be present to give oral testimony.

Her prepared statement will be made part of the record.

[The statement follows:]

STATEMENT OF VIRGINIA VALENTINE

Mr. Chairman, members of the Committee, I'm Virginia Valentine, the General Manager and Chief Engineer of the Clark County Regional Flood Control District. I would like to start by thanking you for the opportunity of appearing before you today in order to present testimony regarding the need to initiate the construction of the U.S. Army Corps of Engineer's flood control project in the Las Vegas Valley.

What I would like to do today is try to paint a picture in your mind of the Las Vegas community and the phenomenal rate of growth which the Valley has experienced over the last decade, and which, according to all current estimates, will continue into the next century. I want to give you an appreciation of the devastation which the area has experienced over the years as a result of flooding, and I would like to let you know the urgency of the need for construction of the Corps' project.

Most people recognize Las Vegas as a world-renowned tourist and convention destination with first-class entertainment and services. This is the view of the picture which is most common. In 1992 alone, Las Vegas welcomed over 20 million visitors. Many of these guests arrived through the gates of McCarran International Airport, the seventeenth busiest airport in the world and the highest rated airport in America in terms of on-time efficiency.

But Las Vegas is more than the entertainment capital of the world. More and more it is becoming a family oriented destination resort. Where a few years ago the vast majority of visitors came to Las Vegas for conventions or other related business activities, today an increasing number of hotel rooms are occupied by families.

This popularity of Las Vegas as a vacation destination has resulted in an astonishing growth in the hotel and casino sector of the local economy. The number of hotel rooms in the Valley has increased by nearly 50 percent in the last 10 years. Today with nearly 75,000 rooms available, the hotels still experience an 85 percent occupancy rate. In order to accommodate the steadily increasing stream of visitors to the area, a new 5,000 room hotel is currently being constructed, and plans for the development of two comparably sized hotels have recently been announced. It is estimated that each hotel room creates 2.85 new permanent jobs in the community. Obviously, this is a very important sector of the local economy.

There is much more to Las Vegas than hotels and casinos. The local economy is becoming more and more diversified. The growth which the Valley has experienced has also been fueled by the outstanding business environment of the State of Nevada. The national or regional headquarters of a number of large corporations have relocated to the Las Vegas area in recent years and more will follow suit. Retirees, attracted by the mild climate, the wealth of recreational opportunities, the high quality of life, and the moderate cost of living, are increasingly choosing the Las Vegas Valley as the place to spend their golden years.

All these factors have caused Las Vegas to experience unprecedented growth over the past twenty years. People have moved from all parts of the nation to seek employment, provide necessary services, and become part of this dynamic community. In 1970, the total population of Clark County was 273,288. By 1990, that population had exploded to 798,957, ninety-five percent of whom lived in the Las Vegas Valley. Nearly 3,500 people have moved into the area each and every month for the last five years making Las Vegas one the fastest growing areas in the nation. Current estimates indicate that the population of the Valley is over 830,000 and will exceed one million by the turn of the century.

Over the years, more than a little rain has fallen in Las Vegas, too often with devastating results. In a special report titled "History of Flooding, Clark County, Nevada 1905–1975," the USDA Soil Conservation Service documents 184 different climatological events that resulted in flooding or a related resource damage from 1905–1975. Since 1960, the area has experienced at least seven "million dollar floods"—floods which caused in excess of $1,000,000 in damages to public and private facilities. In that same period of time, at least 22 people have lost their lives in nine separate flash flood events. Most of these floods took place before the recent explosion in growth. If the same events occurred today, the losses in terms of lives and property damages would certainly be much larger.

On July 3, 1975, Las Vegas received national attention when a flash flood swept through the area causing wide-spread damage and killing two men. Several hundred cars were damaged as flows in the Flamingo Wash roared through the parking lot of Caesar's Palace. Sewage plants were inundated and deactivated by mud and water. It was estimated that direct damages totaled $4–5 million. Additionally, the local hotel industry reported large-scale room cancellations and a significant decrease in revenues when tourists decided that their safety was not something they wanted to take a gamble on. Las Vegas lost one of its biggest revenue holidays that year to flooding.

According to the USGS, the Las Vegas storm was "probably typical of many summer thunderstorms that commonly cause severe flooding each year throughout the desert areas of the southwestern United States. . . . The July 3 storm was notable because it occurred in a populated area. . . . The complex drainage patterns superimposed on the alluvial surfaces indicate that this type of storm runoff has occurred many times in the past."

One of the largest storms on record in the Clark County area occurred on August 10, 1981 in an area approximately 40 miles northeast of Las Vegas. This storm consisted of two highly intense cells of rainfall, one of which dropped an estimated 6.5 inches of rain in a two-hour period, and the second which dropped up to 5 inches of rain in the same two-hour period. According to eyewitnesses, and as later verified by radar and satellite imagery, up to 85 percent of this rain fell in a 15 minute Period. Fortunately this storm occurred in a sparsely populated area of the County. If it had taken place in the Las Vegas Valley it would have undoubtedly been catastrophic.

Exactly two years after the great Moapa Valley storm and flood described previously, a major thunderstorm struck the southwest side of Las Vegas. The total storm rainfall was estimated to be about 5 inches over a 7 hour period. Flood flows in the Flamingo Wash caused significant damage to a number of road crossings. Damages to public and private properties totaled more than $3 million as a result of this flooding.

There were numerous storm and flood events in and around Las Vegas throughout the summer of 1984. As was the case in August, 1983, significant damages (in excess of $9 million) were inflicted on public and private properties. The loss in human terms was even greater as seven people died in two separate instances. In one incident a family of five died attempting to cross the rain-swollen Blue Diamond Wash. Two others died in flooding along the Flamingo Wash. These losses resulted in a Presidential Disaster Declaration for the area in September, 1984. These events also led to the passage of a $15 million bond issue in 1986 to address the flood control needs of the Valley, as well as the formation of the Clark County Regional Flood Control District.

Over the past two years, Las Vegas has again experienced life-taking flooding. In 1990 alone, three people died in separate flooding incidents. In 1992 there were two drowning deaths. Probably the most severe of these floods began shortly before midnight on July 15, 1990. Heavy rain typical of summer thunderstorms in the Southwest began over the sparsely populated desert and mountain areas immediately west of Las Vegas. Within an hour, water levels began rising in the Flamingo Wash near the western boundary of the developed area; a short time later flood flows exceeded the capacity of the four 8′x10′ culverts under a well-traveled roadway. At the peak of the flood, water 2 feet deep was rushing over the roadway. As emergency response personnel mobilized, flood waters continued to rise and began sweeping parked cars in the center of the city along with it. Over thirty cars were destroyed. The loss in terms of human life was even more tragic as a young woman on her way home from work drove into the flowing water, was swept nearly a mile downstream and died.

The destruction which occurred along the Flamingo Wash in 1974, 1983, 1984, and again in 1990, in all likelihood either would have been severely diminished, or would have been non-existent if the projects proposed by the Corps of Engineers had been in place. These facilities are designed to collect the flood flows from a 160 square mile contributing drainage area, funnel them into four detention basins, and then release these flows through the urbanized area of the Las Vegas Valley at non-damaging rates. Because flow over the alluvial fans which ring the Valley is so unpredictable in terms of the direction which it will take during any given flood, all of the components of the Corps' plan are critical for protecting the rapidly developing western areas.

In 1985 the Clark County Regional Flood Control District was formed for the expressed purpose of developing and implementing a plan to protect the lives and properties of the area from the ravages of flooding. Noting the urgency of the problem, a flood control master plan was developed and adopted within one year. This plan identified some $400,000,000 in facilities which were needed immediately in the Las Vegas Valley. An additional $400,000,000 in flood control projects was identified to protect the area when it reached full development. As required by state statute, the Master Plan was updated in September, 1991 and the price tag for flood protecting the Las Vegas Valley alone has now risen to $827 million.

In order to provide the funding necessary to build the facilities identified in the Master Plan, in 1986 the citizens of Clark County overwhelmingly approved an increase in the area's sales tax rate. This source provides the District with approximately $24 million in revenue each year. The vast majority of this funding goes directly into capital improvements, as the District has consistently managed to keep administrative costs below 10 percent of revenues. Given this level of funding and the enormous cost of public works projects, it became readily apparent that it would take years before any significant progress in implementing the Master Plan could be achieved. The District therefore sought and received bonding authority from the State Legislature, and released the first issue of $80 million in bonds in November, 1991.

Even if money was not a limiting factor in the implementation of the flood control program, it is obvious that protection can not be provided overnight. It takes time to design facilities, acquire the land, and build the projects. Recognizing this fact, the District and the local governments actively manage and participate in a variety of other programs designed to protect the population and limit flood damages. A Hydrologic Criteria and Drainage Design Manual has been developed and adopted to ensure that drainage design standards are consistently applied throughout the area. Each local community is a participant in the National Flood Insurance Program, and the standards adopted by the local communities are more restrictive than those required by FEMA. The local communities and the District carefully review any proposed development in regulated flood hazard areas to ensure that the health and safety of the public are not compromised by flooding. In cooperation with the U.S. Geological Survey and the National Weather Service, the District is implementing a state-of-the-art-Flood Warning System which provides real-time information on rainfall and the potential for flooding so that emergency response personnel can respond in the most timely manner possible.

However, the most important of the District's programs is clearly the capital improvement program—the construction of flood control facilities. It is important to note that the flood control plan proposed by the Corps of Engineers is completely compatible with the Master Plan adopted by the Flood Control District and each of the member entities.

The Corps' studies have resulted in the tentative selection of a flood protection plan that would provide 100-year level of protection to the existing developed urban community and the developing alluvial fan area. The recommended plan has been selected because it meets all of the planning objectives and it is the plan which maximized the net national economic development benefits. In the development of the Recommended Plan, full consideration was given to engineering, economic, environmental and social values.

The Plan tentatively selected for implementation provides for the construction of two new detention basins (Blue Diamond and Tropicana); modifications to the existing Red Rock and Flamingo Detention Basins; construction of four debris basins; 27 miles of primary concrete trapezoidal channels; construction of 32 miles of lateral collector channels as an associated non-Federal feature; and an environmental mitigation plan for the threatened Desert Tortoise.

As the local sponsor of the project we have provided a letter of intent to cost share in the construction phase in accordance with the "Water Resources Development Act of 1986." Local officials and the public strongly support the project.

The Plan tentatively selected for implementation has a benefit/cost ratio of 1.2 to 1, and a total first cost (not including interest during construction) presently estimated at $204,000,000 (October 1991 price levels and an 8¾ percent amortization rate). The project was authorized in the Water Resources Development Act (WRDA) of 1992.

The Tropicana and Flamingo Washes study area is located in Southern Nevada, entirely within Clark County, and is located in the Las Vegas community and surrounding area. The study area (approximately 226 square miles) is the Tropicana and Flamingo Washes drainage basin upstream of the Flamingo Wash confluence with Las Vegas Wash. Both the Tropicana and Flamingo Washes emanate in the mountainous region to the west of the greater Las Vegas area. They then flow eastward across the alluvial fan through the developing rural and urban downtown areas to the confluence with Las Vegas Wash. The Flamingo Wash flows in a general west-to-east direction out of the Spring Mountains (elevation 7,000 feet). Red Rock and Tropicana Washes are primary tributaries to Flamingo Wash. The Red Rock Wash has a drainage area of approximately 70 square miles. A large portion of the Red Rock Wash is in the mountainous region. The lower portion of the Flamingo wash drainage area is highly urbanized upstream of its confluence with Las Vegas Wash (elevation 1,700 feet) . Tropicana Wash has a drainage area of about 20 square miles at its confluence with Flamingo Wash. A portion of the flow for Blue Diamond Wash flows into Tropicana Wash at an alluvial fan apex coming out of the foothills. Tropicana Wash is highly urbanized in its lower reaches.

Flood flows from the Tropicana and Flamingo Washes pose a serious threat to the Las Vegas, Nevada community where a mix of residential, commercial, industrial, and public properties are subject to major damage on almost a yearly basis. Approximately 12,000 residents residing in the 500-year floodplain of Tropicana and Flamingo Washes live in fear of flooding.

In developing the plan, a wide array of flood protection measures were considered including non-structural and structural alternatives and a no-action plan. Studies considered flood protection and other water resource measures throughout the entire Tropicana and Flamingo Washes study area to the confluence of Flamingo and Las Vegas Washes.

Certain elements of the Corps' plan are high priority elements of the local Master Plan and have been constructed. The Red Rock Detention Basin was constructed by Clark County in 1985. Construction of the Upper Flamingo Detention Basin was completed in February of 1992 and is the keystone of the Corps' project. Both plans include the network of primary channels needed to funnel flows into the basins as well as outlet channels to contain the reduced flows.

Phase 1 of the project consists of modifying the Red Rock Detention Basin to increase its effectiveness. We have the authorization, the right-of-way and all environmental clearances for the project. The only thing we lack is the money. If funds are appropriated we could easily begin construction of Phase 1 this winter.

Mr. Chairman, we have quantified the need for and identified the elements of the project. We would rather be here today asking you for authorization to spend Federal funds to construct the flood control facilities needed in the Las Vegas Valley than meet in some other forum to plead for disaster assistance. We ask you to provide the Secretary of the Army with $8.0 million to initiate construction of Phase 1 and continue design of the remaining project by 1994. The Corps has nearly completed the design of the first phase of the project and could easily begin construction by the end of the year if funds are made available.

I have provided the following draft language for your consideration: "The Secretary of the Army is provided $8.0 million to initiate construction during fiscal year 1994 on the authorized Tropicana and Flamingo Washes Project. The fiscal year 1994 construction activities will involve modifications to the existing Red Rock Detention Basin. These construction funds include the continuation of the design activities on the subject project."

Thank you for your time. I would be happy to answer any questions you may have.

SUBCOMMITTEE RECESS

Senator KERREY. With that, the subcommittee stands in recess until 2 p.m.

[Whereupon, at 12:15 p.m., Tuesday, March 30, the subcommittee was recessed, to reconvene at 2 p.m., the same day.]

(AFTERNOON SESSION, 2:33 P.M., TUESDAY, MARCH 30, 1993)

NONDEPARTMENTAL WITNESSES

TEXAS WATER RESOURCES PROJECTS

STATEMENT OF HON. JACK BROOKS, U.S. REPRESENTATIVE FROM TEXAS

Senator JOHNSTON. Ladies and gentlemen, we are glad to have most of you here. [Laughter.]

We want to welcome you to our committee.

Congressman Brooks, I am glad to have you here and to have you lead off for Texas. I tell you, I have been doing so many things for Texas at your behest, the scales are badly uneven and you owe me a lot of things. So I am going to let you give us another one of your long shopping lists today, which we will dutifully fulfill every item, as we always do. And don't you forget you friends from Louisiana, because we take such good care of Texas.

So, with that, go ahead with your greedy speech. [Laughter.]

Mr. BROOKS. Nobody will ever forget you so long as you have your beautiful wife and those fine boys. Men, really, that practice law and do so well. [Laughter.]

Well, Mr. Chairman, I want to thank you for this opportunity to appear to urge this committee's favorable consideration of public works projects for the Ninth Congressional District for fiscal year 1994.

I support funding all the items which I anticipate will be included in the budget proposal and I will submit a list of them with my statement rather than discuss each.

As you know, the budget for projects under the Corps has not yet been received and, therefore, I would appreciate the oportunity to provide my specific requests for funding for the record for each specific project after reviewing the projects actually included in the budget after learning the Corps' capabilities for each one.

And if you close the record, Senator, I will send that as a letter so you can go on and close your record and get that printed and on the way, but I will send a letter because I do not know when we will get that budget. You have not gotten it yet either?

FUNDING REQUEST

Senator JOHNSTON. No; we do not have it yet.

Mr. BROOKS. So we need to wait before we make a final decision. And if my expectations are correct, I think they will probably have most of the projects in my area adequately funded. Taylor's Bayou flood control, Clear Creek flood control construction project will, hopefully, be funded at Engineers' capability levels, for which I and the local sponsors will be deeply grateful.

Now, last year, Public Works passed a resolution authorizing the Corps of Engineers to fund an erosion study in Jefferson County for about $300,000 and I ask your serious consideration of continuing this. It is the kind of study that would be of benefit to all of the gulf coast area, as we evolve methods of handling erosion. It is a problem in Louisiana, Texas, Alabama, Mississippi, and Georgia. A substantial part of my district, you know, is covered by the gulf, and sometimes covered by the gulf. It adjoins the area.

And last year, you all appropriated funding under the Galveston Harbor and channel project to take sand from Galveston Channel for the purpose of nourishing those Galveston beaches. Unfortunately, it was subsequently determined that the sand was not of beach quality, and local officials are trying to determine how to combat this problem and they are committed to their share of the funding. They are already committed to that. So it is my hope that the Corps of Engineers can find a way to resolve it. And if you and your staff and other members of your committee have any ideas on that, I would appreciate your suggestions. It is a problem that confronts most all of us on the gulf coast.

In addition, the Neches River saltwater barrier project, authorized in 1976, has been on hold since approximately 1982 for various reasons enumerated in the statement that we submitted from LNVA. But saltwater intrusion is a serious one, as it goes up the Neches River, because it would impinge on the municipal, industrial and agricultural entities in Jefferson County. They cannot use that water when it gets a certain part salinity.

Temporary barriers have been installed over the years and they are in the process now of getting one. We have to get approval from the Corps of Engineers.

Our request today is that the subcommittee consider $200,000 to let the Corps of Engineers determine which is the most affordable and practical way to put in a permanent barrier.

I am deeply grateful to you and your subcommittee for your continued support of Wallisville Lake project. Construction is underway. It is my understanding the Corps has a capability of $1 million, and I would hope you could fund it at that amount.

And I would also ask for $1.5 million to continue the maintenance dredging of the Trinity River Channel to the Port of Liberty.

REORGANIZATION OF CORPS OF ENGINEERS

And finally, Mr. Chairman, I strongly oppose any appropriations for reorganization of the Corps of Engineers' district offices. It is my understanding that the Corps estimates the reorganization plan, if approved by the Secretary of Defense, would cost approximately $215 million. But my understanding also is that it might cost $3 billion. And with specific regard to the Galveston office, they have just completed a few years ago a fine new building. It could stand more engineers and more responsibility instead of less. It has got a lot of responsibility now, including a major Sargent's Beach project, a big one just beginning, not in my district, but on down the Texas coast.

I have made my views known to Les Aspin, Secretary of Defense, and I have written with detail to Chairman Mineta. So I am doing everything I can to stop that appropriation, so there is no doubt about it, that the Corps of Engineers will be unable to redo all of their district offices the way they want to on a program that I believe is badly flawed.

Now, I appreciate your kind consideration. As you know, I and the local sponsors have been appearing before you for many years, and your subcommittees, and you have been more than gracious all that time. And through your support, the Ninth District has been able to bring industries that compete internationally. And without your help, my district, flat as it is, with as many ports, heavy industry, could not now be enjoying the projection it does from the ever present threat of flooding and its tragic effects.

INTRODUCTION OF SUPPORTING WITNESSES

We appreciate your help and I would hope that I could introduce the members of the groups and local sponsors that are here. We have submitted their statements in full. I would like to introduce them. And then we will thank you. If you have any questions, we will try and answer them. If not, we will go away. [Laughter.]

Senator JOHNSTON. That is fine. Why don't you introduce them. I would be glad to meet them.

Mr. BROOKS. I want them to stand, raise their right hand, and swear to tell the whole truth and nothing but the truth.

Sam Smith, he is president of Drainage District 6; accompanied by Robert C. Horn; Pat Henderson; Ronnie Platt—Ronnie had a bad flu. I told him to go home and to go take a nap. He ought to. He needs to get well. Thad Heartfield, in the front row, with his beautiful wife, Cornie; and Kim Carroll.

And from Drainage District 7, M. J. (Duffy) Adair; Joe Lyday; Aimidee Morgan; Billy Joe Butler; Jim Wimberly; Bert Lee.

Did Bert Lee finally show up? He hasn't surfaced all day. [Laughter.]

Mrs. Olga Harville; and Norman Blackman. From the LNVA, Tommy Hebert, general manager from Jefferson County; our distinguished county judge, Richard Leblanc and Cheryl Leblanc.

From Galveston County, Commissioner Wayne Johnson; and from Friendswood, Mayor Evelyn Newman; Councilwoman Kitty Hajecate; and city secretary Deloris McKenzie.

From League City, Ed Poole, and city engineer Jess Hegemier; Bill Kimbrough, from Port of Beaumont; Ben Goldstein and Raymond Johnson from Port Arthur; Charlie Hooks and his wife, Sandra, from Clear Creek Drainage District.

And from Galveston Drainage District 2, Treasurer Ed Ross; from Drainage District 3, Commissioner Jim Broussard.

And I would like to submit those statements from the cities of Friendswood, Galveston, Groves, League City, Port Arthur, and Texas City; Chamber of Commerce in Galveston—you have a copy of that, you know—counties of Galveston and Jefferson; and ports of Beaumont and Port Arthur; Clear Creek Drainage District; Jefferson County Drainage Districts 3, 6, and 7; Jefferson County Navigation District; and LNVA.

We thank you. We appreciate it. If there is anything we can help on, let us know.

Senator JOHNSTON. Well, thank you very much, Jack. I am glad to meet your friends here. We will put their statements in the record, and more than that, we will study them and try to accommodate to them.

In all seriousness, we are familiar with your projects. You have some good projects. And we are going to try to serve you again as we did last year.

Mr. BROOKS. Bless your heart. Thank you very much, Senator.

[The statements follow:]

STATEMENT OF CONGRESSMAN JACK BROOKS OF TEXAS

Mr. Chairman, thank you for this opportunity to appear today to urge the subcommittee's favorable consideration of the public works projects for the Ninth Congressional District of Texas to be included in the fiscal year 1994 budget.

Mr. Chairman, I support funding those items which I anticipate will be included in the budget proposal and will submit a list of them with my statement rather than discuss each one individually.

As you know, Mr. Chairman, the budget for projects under the Corps of Engineers' jurisdiction has not yet been received; therefore, I would appreciate the opportunity to provide my specific requests for funding for the record for each specific project after reviewing the projects actually included in the budget and after learning the corps' capabilities for each one.

If my expectations are correct, most of the authorized projects in my district will probably be adequately funded in the budget. The Taylor's Bayou flood control and drainage project and our Clear Creek flood control construction projects will hopefully be funded to the Corps of Engineers' capability levels, for which I and their local sponsors will be deeply grateful.

Last year, the House Public Works Committee passed a resolution authorizing the Corps of Engineers to conduct a Jefferson County, Texas, shore erosion study, at a funding level of $300,000. I would request the subcommittee's serious consideration of approving this amount for this important work.

It is my understanding the corps may have a capability of $1,000,000. I would deeply appreciate the committee's consideration of funding that amount.

In addition, I most respectfully request that $1.5 million be appropriated to continue the maintenance dredging of the Trinity River channel to the Port of Liberty.

Finally, Mr. Chairman, I strongly oppose any appropriation for the reorganization of Corps of Engineers district offices. It is my understanding that the corps estimates that their reorganization plan—if approved by the Secretary of Defense—would cost approximately $215 million, but I have seen estimates reaching as high as $3 billion! With specific regard to the Galveston District office, as you know, its jurisdiction encompasses many waterways, bridges, highways, flood control projects, beach erosion projects, etc., and it is unfathomable to me that this busy district, with several construction projects on-going, as well as the new major Sargent's Beach erosion project just beginning, would be downgraded. In addition, with the completion of their new headquarters building, the Galveston District office can handle more engineers, not less. I have made my views known to Secretary Aspin as well as the chairman of the Public Works Committee Norman Minetta that I am absolutely opposed to any actions which would downgrade the Galveston District office.

Mr. Chairman, I appreciate your kind consideration of these requests. As you know, I and the local project sponsors have been appearing before you asking for your support for these important projects for many years. You and your subcommittee members have always been most gracious in helping us.

It is through your support that the Ninth Congressional District has been able to progress and provide the type of atmosphere that is conducive to attracting new industry. Without your help, my district, with its many ports and heavy industry, could not now be enjoying protection from the ever-present threat of flooding and its tragic effects.

A substantial part of my congressional district is bordered by the Gulf of Mexico. Beach erosion is a serious problem of major proportions, which is only exacerbated by the hurricanes which are prone to strike this part of my district quite frequently.

Last year, you appropriated funding under the Galveston harbor and channel project which would have provided for the taking of sand from the Galveston Channel for the purpose of nourishing the Galveston beaches. Unfortunately, it was subsequently determined that the sand was not of beach quality. Local officials are working diligently on trying to determine how to combat this serious problem and are committed to their share of the funding. Therefore, it is my hope that the Corps of Engineers can find a way to resolve this problem and if there is anything that this subcommittee, in its wisdom, can suggest, we would be most appreciative.

In addition, the Neches River saltwater barrier project—authorized in 1976—has been on hold since approximately 1982 for various reasons, which are enumerated in the statement submitted by the lower Neches Valley River Authority. The problem of saltwater intrusion is a serious one for the municipal, industrial and agricultural entities in Jefferson County. Temporary saltwater barriers have been installed over the years, however, residents in the area claim that they cause flooding, thus, the Corps of Engineers is looking closely at those concerns before authorizing a permit for new temporary barriers. My request today is that the subcommittee consider an appropriation of $200,000 for this project to be used for confirming the most affordable permanent barrier design and to reactivate the planning process by the Corps of Engineers.

Mr. Chairman, I am deeply grateful to you and your subcommittee members for your continued support of funding for construction of the Wallisville saltwater barrier project. Construction is on-going.

Your assistance again this year will be most deeply appreciated by the local officials here today as well as by all of the residents of the Ninth Congressional District.

Mr. Chairman, as already mentioned, I have with me today a number of persons vitally concerned with these projects. They are here today to support these statements and to answer any questions the subcommittee may have. I would like to introduce them at this time.

I also submit for the consideration of the subcommittee statements in support of these projects from the following:

Cities of: Friendswood, Galveston, Groves, League City, Nederland, Port Arthur, and Texas City.

Chambers of commerce: Galveston. Counties of: Galveston and Jefferson. Ports of: Beaumont and Port Arthur.

Clear Creek Drainage District; Jefferson County Drainage District Nos. 3, 6, and 7; Jefferson County Navigation District; and Lower Neches Valley Authority.

Jefferson County Drainage District No. 6: President Sam O. Smith; Vice President/Secretary Robert C. Horn; Commissioner Patricia A. Henderson; General Manager Ronnie E. Platt; Thad Heartfield, attorney; and Mrs. Cornelia Heartfield; and Kim Carroll.

Jefferson County Drainage District No. 7: President M.J. “Duffy” Adair; Commissioner Joe Lyday; Commissioner Amidee Morgan; Commissioner Billy Joe Butler; Commissioner Jim Wimberly; Bert Lee, manager; and Norman Blackman.

Lower Neches Valley Authority: Tommy Hebert, general manager. Jefferson County: Judge Richard LeBlanc and Mrs. Cheryl LeBlanc. Galveston County: Commissioner Wayne Johnson and William Walsh. City of Friendswood: Mayor Evelyn Newman; Councilwoman Kitten Hajecate; and city secretary Deloris McKenzie.

City of League City: Councilman Ed Poole and city engineer Jess Hegemier. Port of Beaumont: Bill Kimbrough, president, board of commissioners. Port of Port Arthur: Ben Goldstein, general manager/port director; and Raymond C. Johnson, president, board of commissioners. Clear Creek Drainage District; President Charles Hooks and Mrs. Sandra Hooks. Galveston County Drainage District No. 2: secretary/treasurer Ed Ross. Jefferson County Drainage District No. 3: Commissioner/Manager Jim Broussard.

RESOLUTION OF THE CITY OF FRIENDSWOOD, TX

RESOLUTION NO. R93–4

A resolution endorsing the U.S. Army Corps of Engineers Clear Creek flood control project; and urging the United States Congress to act favorably on the appropriation of funds contained in the FY1994 budget for this project.

Whereas, a serious flood problem exists in the Clear Creek Watershed where existing residential and commercial areas are periodically subject to extensive damages from rising waters in the creek; and

Whereas, in the City of Friendswood in July 1979, 1600 out of 3000 homes were flooded with coincident economic losses exceeding $38,000,000; and

Whereas, in the City of Friendswood in September 1979, 500 of these homes were again flooded; and

Whereas, in the City of Friendswood in January 1980, 75 of these homes were again flooded; and

Whereas, in the City of Friendswood in August 1989, 500 of these homes were again flooded; and

Whereas, the citizens continue to suffer economic loss and mental anguish as a result of flooding; and

Whereas, the citizens have been donating their time and labor in an effort to clear the creeks and banks of debris; and

Whereas, the local drainage authorities are actively improving the Clear Creek tributaries; and

Whereas, the United States Congress in 1939 authorized the U.S. Army Corps of Engineers to begin a study of Clear Creek; and

Whereas, the United States Congress in 1968 authorized the U.S. Army Corps of Engineers to design a flood control project which would provide a significant measure of protection from recurring flooding problems in the Clear Creek Watershed; and

Whereas, the study has been completed and an consensus has been achieved by all local sponsors and entities and endorsed by the 67th Texas Legislature; and

Whereas, the project has been approved by the U.S. Army Corps District in Galveston and the Corps Southwest Division; and

Whereas, further delays will significantly increase the cost of the project as well as the probability of additional flooding; and

Whereas, the local sponsors of the project have agreed to provide funding for the local costs of construction; and

Whereas, Congress has provided funding for the first phase of construction; and

Whereas, construction of the first phase of the project began in July, 1989; and

Whereas, FY1994 funding of the project is essential to the continuation of the project.

Now, therefore, be it resolved by the City Councilmembers of the City of Friendswood, Texas:

That the City re-endorse the Congress of the United States to adopt the budget and appropriate construction funds so that the U.S. Army Corps of Engineers may continue the rectification work; and

That the City urge the Congress to take whatever additional action is necessary to expedite the project and thereby reduce the emotional, physical and economic suffering due to the flooding; and

That the City Secretary forward official copies of this resolution to the President of the United States, to the Speaker of the House of Representatives and President of the Senate of the United States Congress, and to all members of the Texas Delegation to the Congress, with the request that this resolution be officially entered into the Congressional Record.

RESOLUTION OF THE CITY COUNCIL OF GROVES, TX

RESOLUTION NO. 93–05

Whereas, the Groves City Council supports the following public works projects which Congressman Jack Brooks will present before the House Committee on Appropriations and Senator Bob Krueger will present before the Senate Committee on Appropriations for funding in the fiscal year 1994 budget:

Clear Creek
Galveston Harbor and Channel
Gulf Intracoastal Waterway
Houston Ship Channel
Sabine-Neches Waterway
Taylors Bayou
Houston-Galveston Navigation Channels
Wallisville Lake

Whereas, the Groves City Council also supports funding of any other public works projects which may be included at the request of Jefferson County Drainage District No. 7 for improvements to its hurricane protection system; and

Whereas, the Groves City Council opposes the Corps of Engineers' proposed Reorganization Plan for the Galveston District Office and also opposes any funding for this purpose; now, therefore,

Be it resolved by the City Council of the City of Groves:

Section 1: That the City Council wholeheartedly supports the above listed projects, including improvements to the Jefferson County Drainage District No. 7 hurricane protection system, for funding in the fiscal year 1994 budget.

Section 2: That the City Council opposes the reorganization of the Galveston District Office proposed by the Corps of Engineers and will not support funding for this purpose.

Section 3: That a copy of this resolution be furnished Congressman Jack Brooks, Senator Bob Krueger, and members of the House and Senate Committees on Appropriations.

Passed, approved, and adopted at a regular meeting of the City Council of the City of Groves held March 15, 1993.

STATEMENT OF THE CITY OF NEDERLAND, TX

Dear Senator Johnston, this is to advise that the City of Nederland is situated in the Ninth Congressional District, Texas, and recommends your consideration of fiscal year 1994 Budget appropriations for the following projects for which the FY 1994 budget is not available:

Clear Creek, Galveston Harbor and Channel, Gulf Intracoastal Waterway, Houston Ship Channel, Sabine-Neches Waterway, Taylors Bayou, Houston-Galveston Navigation Channels, Wallisville Lake.

The City would also like to go on record as opposing the Corps of Engineers proposed Reorganization Plan for the Galveston District Office and opposing any funding for this purpose.

Your consideration of these recommendations is appreciated.

STATEMENT OF THE CITY OF PORT NECHES, TX

The City of Port Neches, Texas supports the following public works projects which you will present before the House Committee on Appropriations and Senator Bob Krueger will present before the Senate Committee on Appropriations for funding in the fiscal year 1994 budget: Clear Creek, Galveston Harbor & Channel, Gulf Intracoastal Waterway, Houston Ship Channel, Sabine-Neches Waterway, Taylors Bayou, Houston-Galveston Navigation Channels Wallisville Lake.

We also support funding of any other public works projects which may be included at the request of Jefferson County Drainage District No. 7 for improvements to its hurricane protection system.

We oppose the Corps of Engineers' proposed Reorganization Plan for the Galveston District Office and also oppose any funding for this purpose.

We are most grateful for your efforts in presenting the needs in our area.

STATEMENT OF THE CITY OF TEXAS CITY, TX

Dear Senator Johnston, on behalf of the Commission and citizens of Texas City we sincerely request that you oppose the funding of the proposed reorganization plan for the Corps of Engineers for the Galveston District Office. The location of a District Office in this area is vital to the continued coordination of development and environment along the Texas Gulf Coast. Our extensive coastline, with its industrial development and recreational facilities warrants this District office remaining in Galveston.

We urge your opposition to the above referred to reorganization plan in the 1993 Budget. Should you have any specific questions pertaining to this request, we will be most willing to cooperate in providing any additional information to your committee.

STATEMENT OF THE GALVESTON COUNTY, TX, COMMISSIONERS COURT

Dear Senator Johnston and members of the subcommittee, Galveston County has been the local sponsor with the U.S. Corps of Engineers for the construction of various flood control projects in Galveston County since the first seawall was started in Galveston shortly after the 1900 Hurricane. The Galveston Seawall was extended in length in 1962 to approximately ten miles protecting the most populated part of the City of Galveston. Galveston County also was sponsor of the 17-mile Texas City-La Marque Hurricane Protection Levee completed in 1987 and the Highland Bayou Flood Control Project completed in 1984.

Clear Creek flood control project

The current flood control project sponsored by Galveston County is along Clear Creek in the cities of League City and Friendswood in partnership with the Harris

County Flood Control District. Construction is now underway with an official groundbreaking having taken place in March, 1989. Galveston County, Harris County, and the U.S. Corps of Engineers signed the Clear Creek contract on June 30, 1986, on the Highway 146 bridge over Clear Creek on the boundary between Galveston and Harris counties. We appear before this Honorable Committee to urge your support for appropriations for construction on Clear Creek.

The Galveston County Commissioners Court respectfully urges the Honorable Committee to approve full funding, up to the Corps of Engineers capability, for the Clear Creek Flood Control Project. The first contract for the gates on the second outlet between Clear Lake and Galveston Bay was let in 1989 and is now complete. The second outlet channel will be contracted in 1993 if some resolution can be made concerning the channel under the Southern Pacific Railroad tracks.

It is extremely important that the Clear Creek Flood Control Project continue in fiscal year 1994 with the funds recommended by the Corps of Engineers. After approximately fifteen years of planning, the Corps of Engineers made final engineering decisions on this project in 1983 and completed detailed engineering design for the second outlet from Clear Lake to Galveston Bay and for the flood gates to control flow. This project is designed to provide flood relief for over 500,000 people in the Clear Creek watershed in Galveston and Harris counties. It was also designed in such a way as to protect the sensitive environment of Clear Creek, and this decision received overwhelming public support in a January, 1982, public hearing. The two local sponsors, Galveston County and Harris County, support the Corps of Engineers design which will accommodate a 10-year flood with the remainder of the 100-year flood plain to be protected by flood plain management.

In 1979, over 2,000 homes in Friendswood and League City along Clear Creek were flooded twice—in July from Tropical Storm Claudette and again in September. Several thousand homes were also flooded in Brazoria and Harris counties. Losses from flooding in these three counties from the 1979 floods were well over $200,000,000. People are desperate to do something—almost anything—on Clear Creek, and the Corps of Engineers is trying to expedite this project. In August, 1989, Hurricane Chantel flooded over 500 homes along Clear Creek in Galveston and Harris counties, so the urgency of the project has been emphasized to us once again.

Inasmuch as the Clear Creek Flood Control Project has been in the study and design stages for twenty-four years (authorized in 1968), it is most urgent that the construction continue in fiscal year 1994 and beyond. The study has been a high priority by the Corps of Engineers, and over $2,500,000 in planning and engineering has been spent. We sincerely hope you will approve full Corps of Engineers requested funding for fiscal year 1994 for construction of the project. Galveston County passed a $5,000,000 bond election in November, 1985, to provide its local share of the cost. Thus, we are ready, willing, and able to assume our local responsibility for this project. Right-of-way and disposal areas are being acquired by both Galveston and Harris counties now and will continue full speed as the construction proceeds.

Thank you for your consideration of these requests and for your time in allowing us to be present at these hearings. We stand ready to assist you in any way and to furnish any additional information you may require.

STATEMENT OF THE JEFFERSON COUNTY, TX, COMMISSIONERS COURT

Dear Senator Johnston, the Commissioners' Court of Jefferson County, Texas would like to go on record in support of the following projects which pertain to Jefferson County and will be presented by Senator Bob Krueger on March 30 1993: Gulf Intracoastal Waterway, Sabine-Neches Waterway, Taylors Bayou, and a study to investigate the erosion problems in Jefferson County along State Highway 87.

It is our opinion that said projects should be included in the 1994 budget as these projects are vital to our area and are in the best interest of the citizens of Jefferson County.

Also, we oppose the Corps of Engineers proposed reorganization plan for the Galveston District Office and oppose any funding for this purpose.

STATEMENT OF THE GALVESTON CHAMBER OF COMMERCE, TX

Dear Chairman Johnston, the Galveston Chamber of Commerce is opposed to the Corps of Engineers proposed Reorganization Plan for the Galveston: District office.

The City of Galveston is still suffering the loss of the Navy Homeport project and does not need another negative economic impact. Your support for continuing the Galveston Corps of Engineers office without any downsizing will be appreciated.

We appreciate the budget challenge that you face at the national level, but we believe that our city has suffered enough in the federal budget reduction process.

Thank you for your time and consideration.

STATEMENT OF THE PORT OF BEAUMONT, TX

Dear Senator Johnston, the Port of Beaumont Navigation District of Jefferson County, Texas strongly supports a substantial increase in the amount funded for those items in the public works budget for the fiscal year 1994 for continued operation and maintenance of the Sabine-Neches Waterway.

The Port of Beaumont Navigation District of Jefferson County, Texas is the agency that operates and maintains the public wharves of the Port of Beaumont. The Sabine-Neches Waterway is the vital link between the public wharves and the Gulf of Mexico.

Proper maintenance of this waterway is absolutely essential for the efficient operation of the marine terminals located thereon. We respectfully urge your committee to approve funds sufficient for the continued maintenance and operation of the Sabine-Neches Waterway.

We also strongly support sufficient funding for the operation and maintenance of the Gulf Intracoastal Waterway and Taylors Bayou. Proper maintenance of these waterways is very important to the transportation efficiency of our area.

Additionally, we oppose the Corps of Engineers proposed Reorganization Plan for the Galveston District Office and oppose any funding for this purpose. We are concerned about the establishment of technical centers removed from ports and the removal of technical personnel from port District offices, such as the Galveston District Office. We respectfully request that the necessary port support services be preserved at the District level.

STATEMENT OF THE PORT OF PORT ARTHUR, TX

Dear Senator Johnston, we respectfully ask that you favorably consider the public works funds request, by our Congressman Jack B. Brooks, for the Operations and Maintenance of the Sabine Neches Waterway, Taylors Bayou and the Gulf Intracoastal Waterway of Texas. Only minimally necessary funds are requested, to insure the operation and maintenance of these vital federal waterways.

The major refineries on our Sabine Neches Waterway annually produce a high percentage of America's energy fuels. The Waterway handles up to 90,815,000 short tons of commerce, including import crudes, domestic and export shipments as well. The economic and military security of America depends on keeping these vital waterways open, now and in the future.

The Gulf Intracoastal Waterway of Texas is an indispensable connecting link between hundreds of chemical and petrochemical plants and other refineries, here and across the Gulf Coast. These essential industries produced an impact in excess of $23.9 billion dollars in transporting 82.3 million short tons, just on the Texas segments of the Gulf Intracoastal Waterway, alone, according to estimates available.

No new construction is anticipated in these requests, and the funds appropriated are vital to our economy and national defense. Your favorable consideration is justified, we submit, and is respectfully submitted.

We wish to take this opportunity to request your consideration of our opposition to the Corps of Engineers proposed reorganization plan for the Galveston office as well as any funding for this purpose. We feel the Corps is more effective with all divisions housed in Galveston rather than various components being relocated which will only create additional unnecessary delays of important projects and is certainly not in the best interest of our federal waterways.

While we concur with sound economical restructuring, we have serious concerns that the plan proposed would have a negative impact on Texas Ports, Industry and the Gulf Intracoastal Waterway which would result in inefficiency as well as greater costs to the taxpayer.

RESOLUTION OF THE CLEAR CREEK DRAINAGE DISTRICT, TX

RESOLUTION 93-3

A resolution endorsing U.S. Army Corps of Engineer's Clear Creek flood control project, State of Texas: and urging the United States Congress to continue construction funding of the project in the FY 1994 budget.

Whereas, the Clear Creek Watershed includes portions of Galveston County as well as parts of Harris County and Fort Bend County, and

Whereas, a serious flood problem exists in Clear Creek Watershed where existing residential and commercial areas are subject to extensive damages from rising waters in Clear Creek and its tributaries, and

Whereas, the taxpayers of the District made a serious commitment in 1982 to the concept of self-help by voting an increase in taxes for flood control, and

Whereas, in spite of the increased taxes, the amount by which the flood hazard in the District can be reduced without a major project to increase the flow capacity of Clear Creek is severely limited, and

Whereas, the scope of the work required to achieve the necessary improvements on Clear Creek requires the extensive technical management resources that the Corps of Engineers can provide, and

Whereas, the cost of the improvement needed on Clear Creek far exceeds the financial capabilities of local entities, and

Whereas, the benefits of the Corps of Engineers Clear Creek Project would include substantial reductions in claims against the National Flood Insurance Program, and

Whereas, the residents in the District continue to experience economic loss as a result of unnecessarily frequent flooding, and

Whereas, the residents of the District continually suffer extreme mental anguish because of the frequent threat of flooding, as well as the flooding itself, and

Whereas, the Clear Creek Drainage District, within the limits of its resources, and with the cooperation of other local governmental agencies, as well as individual citizens who have donated their time and labor, has been clearing debris and executing structural improvement projects in the creeks to increase their capacity, and

Whereas, the U.S. Army Corps of Engineers has designed a cost effective flood control project as authorized by the United States Congress which will provide a significant measure of protection from recurring flooding problems in the Clear Creek Watershed, and

Whereas, Congress approved $8 million to start construction of the Clear Creek Flood Control Project in the federal budget for fiscal year 1987, $4.8 million for fiscal year 1988, $4.3 million for fiscal year 1989, $6.1 million for fiscal year 1990, $3.7 million for fiscal year 1991, $2.4 million for fiscal year 1992, and $4.1 million for fiscal year 1993, and

Whereas, delays will significantly increase the cost of the project as well as the probability of additional flooding, therefore.

Be it resolved by the Board of Supervisors of the Clear Creek Drainage District of Galveston County, Texas:

That the District re-endorse the U.S. Army Corps of Engineers Clear Creek Flood Control Project, and

That the District urge Congress of the United States to recognize that the Corps of Engineers Clear Creek Project is not a mere convenience item, but is absolutely necessary in order to restore the quality of life of thousands of people to a reasonable condition that they have every right to expect, and

That the District urge the Congress of the United States to approve the necessary funding for construction of the project in the FY-94 budget, and

That the District urge the Congress to take whatever additional action is necessary to expedite the project and thereby reduce the emotional, physical, and economic suffering due to flooding.

That the District opposes the Corps of Engineers proposed Reorganization Plan for the Galveston District Office and any funding for this purpose.

Passed, approved, and adopted this 9th day of March, 1993.

STATEMENT OF THE CLEAR CREEK DRAINAGE DISTRICT, TX

The Clear Creek Flood Control Project is an absolute necessity to the health, safety, and well-being of the people who live in the Clear Creek watershed. As the land in the watershed has undergone development, pastures and farmland have been converted to parking lots, streets, runways, buildings, and other surfaces from which rain water runs off in an extremely rapid manner. Although there have been, and continue to be, improvements made to drainage arteries in the region by local agencies, consistent with their resources, and although storm water run-off and flood plain control has been in effect in the counties of the Clear Creek watershed since 1979–80, the effects of land development and subsidence have already reached the point that Clear Creek simply cannot carry storm water away to Galveston Bay fast enough to keep water out of our homes. So, until Clear Creek is improved in its water handling capacity, we do not have the ability to make substantial improvement to the flood hazards that our citizens are living with every day.

People here realize that it is not feasible to prevent flooding by a storm like Claudette which struck this area in July, 1979 and dropped 30–40 inches of rain on us in a two-day period. However, our people are getting water in their homes when much less spectacular rains occur—five-year and ten-year frequency precipitation is causing flooding. Even those people who are not getting water in their homes cannot get through. A fire or serious medical problem occurring during, or for many hours after such rains, would go unanswered in many places.

The Corps of Engineers has devised a plan for improving Clear Creek that is economically sound (benefit to cost ratio of 2.6), run off for a ten-year frequency storm. Furthermore, the 100-year flood plain will be reduced by 25% overall in the watershed. We fervently hope that appropriation of construction funds will again be approved and included in the FY 1994 Budget. The Project is not frivolous, nor a convenience type of improvement—it deals with people's safety and health, both physical and psychological. Many of our people fear rain; anxiety levels run very high when a heavy rain lasts more that a couple of hours, especially when water starts to rise in the streets and into people's yards!

Gentlemen, we need the Clear Creek Project and respectfully request that additional construction funding be included in the FY 1994 Budget.

STATEMENT OF THE JEFFERSON COUNTY, TX, DRAINAGE DISTRICT NO. 3

Dear Senator Johnston, works on the Taylor's Bayou Drainage and Flood Control Project has continued to progress for several years and during that period of time a great deal has been accomplished. The citizens and residents of this area are anxiously awaiting the day when we can say that the project has been completed.

Since work has commenced, the outfall channel for the project has been completed, the widening and deepening of the intercoastal water way has been completed and the salt water barrier and seven salt water intrusion gates have been installed. Phase I of the project is almost totally completed. Phase II of the project is well underway and the widening and deepening of Taylor's and Hillebrandt Bayous has commenced under Phase II of the project. It is of vital importance that Phase II of the project be continued and finished as soon as possible in order to tie in the overall project so that flooding of the homes, residential areas and vital farm land will no longer continue.

Jefferson County Drainage District No. 3 is again requesting your support and assistance in having the necessary funding included in the budget for the fiscal year 1993.

At this time we wish to oppose the funding for the Corps of Engineers proposed Reorganization Plan for the Galveston District Office. We have had a long, enjoyable working relationship with this office and see no need for change.

STATEMENT OF THE JEFFERSON COUNTY, TX, DRAINAGE DISTRICT NO. 6

Dear Senator Johnston, over the past several years the Taylors Bayou Drainage and Flood Control Project has been moving ahead with the acquisition of channel rights-of-way, the purchase of spoil disposal areas, the coordination of mitigation with environmental agencies, and the widening and deepening of the main drainage channels. These efforts are to provide better drainage and flood relief as well as to enhance the navigability of these waterways.

Phase I became operational in the spring of 1987; and, since then, a reasonable degree of flood relief has been realized by residents and property owners in the area. Phase II is well underway; and, with each section completed, additional benefits will be received. Currently, dredging is being conducted in the upper reaches of the project.

This work would not be possible without federal assistance and the continuing efforts of our own Congressman Jack Brooks. The citizens of this area are indebted to the several Congressional committees that review appropriations each year and have seen fit to continue funding for the Taylors Bayou Project.

The District supports the continued funding of this project to the level of the Corps of Engineers capability and looks forward to its completion within the next several years.

Additionally, the District also supports the funding request for the Sabine-Neches Waterway (O&M) to the capability assigned and also for the Gulf Intracoastal Waterway.

Also, the District takes this opportunity to go on record as opposing the reorganization of the U.S. Army Corps of Engineers as presented approximately six months ago. We are also opposed to any funding to accomplish such a reorganization. The Corps has long been a major force in public works projects of significant impact in this area, and the reduction in available professionals at the Galveston District office would be a serious detriment to its effectiveness for the Texas Gulf Coast region.

Your thoughtful consideration and approval of funding for these very important and beneficial projects is requested and appreciated.

STATEMENT OF THE JEFFERSON COUNTY, TX, DRAINAGE DISTRICT NO. 7

Gentlemen, the Board of Commissioners of Jefferson County Drainage District No. 7 urges your continued support of the construction of the Taylors Bayou Project in Jefferson County, Texas and to include in the proposed fiscal year 1994 budget, the vital funds necessary for the completion of this project.

Since sixty percent of Jefferson County and most of Jefferson County Drainage District No. 7 drain into Taylors Bayou and its tributaries, the completion of this important flood control project is critical to our future growth and the well-being of our citizens.

We thank you for your past consideration and hope that you will look favorably upon our request this year.

STATEMENT OF THE JEFFERSON COUNTY, TX, NAVIGATION DISTRICT

SABINE-NECHES WATERWAY (TEXAS)

The Jefferson County Navigation District of Beaumont, Texas is the local sponsor of the Sabine-Neches Waterway as authorized by Congress.

The Sabine-Neches Waterway is a federally maintained navigation project extending from the Gulf of Mexico, through a jettied entrance at the mouth of Sabine Pass, inland to the deepwater ports of Port Arthur, Beaumont, and Orange, Texas, a total distance of approximately 84 miles. The project includes deep draft channels of the following dimensions; 42 feet deep and 800 feet wide across the Sabine Bank in the Gulf of Mexico; 40 feet deep and a varying width of 800 feet to 500 feet through the jetty channel; a depth of 40 feet and a width of 500 feet from the jetty channel to the Turning Basins at Port Arthur; a 40-foot depth and a 400-foot width from Port Arthur via the Sabine-Neches Canal and the Neches River to the Port of Beaumont; a 30-foot depth and a 200-foot width from mouth of Neches River upstream thru the Sabine River to the Port of Orange.

In addition to the above dry cargo ports, Mobil Oil Corporation, Star Enterprises, Chevron and American Petrofina Company of Texas have located their major refineries along this ship channel. These four refineries have a total rated processing capacity of approximately 1,000,000 barrels of crude oil per day. This is about 11 percent of the nation's refining capacity. A great majority of this crude oil is imported by tankers through this waterway and the ports and energy related industries along this channel have billions of dollars invested in pipe lines, tanks, wharves, docks and other plant installations.

A recent survey indicates that the principal industries of this area are engaged in multimillion dollar expansion and modernization programs. Other projects are on the drawing board and in the planning stages.

In addition to providing crude oil to the local refineries, Sun Marine Terminals also furnishes others with considerable oil. The Department of Energy has invested in excess of 35 million dollars in Sunoco's Neches River facilities, not including the cost of a pipeline to the Hackberry Strategic Reserve Salt Dome Oil Storage Terminal, nor does it include the development of the Big Hill Storage Terminal, the construction of which continues. The majority of this commodity is foreign imported crude oil and the handling requires the use of many large tankers which further overcrowds this already extensively used ship channel.

All of the foregoing development is largely due to the existence of the Sabine-Neches Waterway, our area's life line to the world for its exports and imports.

This extensive and expanding complex comprises a critical basic energy related industry that is absolutely vital to the nation's economic and energy and defense needs. Their diminution for any reason would have a deleterious effect nationally as well as regionally.

The U.S. Corps of Engineers reported that, in 1990 (the latest tonnage figures available), the Sabine-Neches Waterway Ports of Beaumont, Port Arthur, Sabine Pass and Orange handled more than 90,000,000 tons of dry and liquid cargoes. Shipping of this magnitude necessarily involves the use of a great many vessels which, of course, creates congestion on the waterway. To compound the problem, the present size of the oil tankers, grain vessels and cargo ships using this waterway are such that an even deeper and wider channel is needed at times, hence the importance of maintaining the waterway free of shoals.

Recent studies by the Corps of Engineers and complaints from the shipping industry reflect that there is continuous serious siltation and shoaling in the Gulf entrance channel at Sabine, and continuous extensive shoaling along several reaches of the in-land channels. They find that these conditions will rapidly become worse, and, if not corrected, eventually the channel could be closed to deep sea navigation.

Correcting these conditions will decrease chances of collisions and groundings of the many vessels carrying crude oil and refined products. Such occurrences, as stated by the Corps of Engineers in their environmental impact report "would result in adverse environmental impact and public health hazards". Failure to maintain the channel would result in severe adverse economic effects on the project area, the state and even the nation. Effects would include the loss of billions of dollars worth of facilities adjacent to the channel, loss of employment for thousands of people and disruption of the manufacture and transportation of a significant portion of the nation's "fossil fuel supply".

According to the U.S. Corps of Engineers, the funds included in the proposed budget for F.Y. 1994 will be utilized for dredging several reaches of the Sabine-Neches Waterway.

As the sponsoring agency, the Jefferson County Navigation District stands ready to provide all needed disposal land areas, rights-of-way, relocations and confining structures for this project.

The District, representing the above mentioned many ports, refineries, grain elevators and other shippers using this waterway, supported by our Congressman, the Honorable Jack Brooks, respectfully request that the F.Y. 1994 Budget include sufficient funds to properly maintain the Sabine-Neches Waterway, the amount of which would be considered commensurate with the capability of the U.S. Corps of Engineers.

In closing, we wish to voice our opposition to the U.S. Corps of Engineers' proposed Reorganization Plan for the Galveston District Office, and, we oppose any funding for this purpose.

TAYLORS BAYOU, TX

Jefferson County Navigation District is one of the sponsors of the Taylors Bayou Drainage and Flood Control Project. It is also responsible for the maintenance and operation of a newly constructed saltwater barrier and drainage gates, this unit also being a part of the Taylors Bayou Drainage and Flood Control Project. In addition to the foregoing, we maintain and operate existing navigation locks and drainage gates, also vital components of the drainage systems for the Taylors Bayou watershed.

The Taylors Bayou Project is nearing completion. Considerable channel rectification work has been accomplished on Phase II and the realization of this drainage improvement project is much nearer to reality. Therefore, it is important that sufficient funds be provided to continue this urgently needed work before more costly damages are inflicted on the home owners and businesses of our community.

As one of the sponsoring agencies, Jefferson County Navigation District stands ready to meet its commitments to furnish its share of the local assurances required.

The District, representing the people and industries of this district, and supported by our Congressman, The Honorable Jack Brooks, respectfully request that the F.Y. 1994 Budget include sufficient funds to continue this important work, the amount of which would be commensurate with the capability of the U.S. Corps of Engineers.

STATEMENT OF THE LOWER NECHES VALLEY AUTHORITY

Dear Senator Johnston, salt water intrusion in the Neches River from the Gulf of Mexico is a problem which fresh water users in the lower Neches Basin have had to contend with since the early 1900's. As the principal distributor of fresh water in that area, the Lower Neches Valley Authority (LNVA) has been involved in controlling the extent of salt water intrusion to protect the fresh water supply for over 200,000 residents, one of the world's great petroleum and petro-chemical processing centers and an area of over 100,000 acres of irrigable cropland.

The LNVA diverts amounts up to one billion gallons per day of fresh water from the Neches River and Pine Island Bayou for most municipal, industrial and agricultural uses in a three-county area of southeast Texas. The diversion points are located in the upper reaches of the Neches tidal estuary, in which salt water is present in increasing concentrations southward to its confluence with Sabine Lake and, ultimately, the Gulf of Mexico.

The presence of salt in water delivered to its users by LNVA is unacceptable. Indeed, its presence at certain concentrations is life-threatening to agricultural crops, people and livestock, and may have catastrophic effects on industrial processes. LNVA is not only authorized but charged with the responsibility of protecting its fresh water supply against salt intrusion.

LNVA has, since 1945, installed temporary salt water barriers in the Neches River and Pine Island Bayou for purposes of protection. The temporary barriers are relatively costly but remain the most viable short-term alternative to salt intrusion.

For over thirty years, a Federal project to build a permanent salt water barrier, designed by the U.S. Army Corps of Engineers, on the Neches River has been under consideration. The permanent barrier offers advantages of negligible environmental impacts and tremendous conservation benefits. Its cost, however, is very large and difficult for a small organization with modest assets, such as LNVA, to justify when there exists a less costly alternative, the temporary saltwater barriers.

In recognition of the high cost of the permanent barrier, agreement was reached in the 1970's between the Federal Government and LNVA to jointly fund the project. The project was authorized by Public Law 94–587, dated October 22, 1976. Negotiations leading to the funding agreement recognized that the principal reason that LNVA experiences salt water intrusion problems is that the Federally sponsored deep water channel up the Neches River to Beaumont, Texas permits salt water from the Gulf of Mexico to reach LNVA's freshwater intakes. The recognition of this fact resulted in the fixing of the Federal cost share at approximately 85 percent of project costs.

Before the project design and documents were finalized, however, the Federal cost sharing policies were revised and the non-Federal sponsors' share increased in 1985 from the originally fixed amount of $2.1 million to $14.3 million. LNVA's governing Board of Directors at that point agreed that this amount was beyond its ability to finance and elected to continue its practice of installing the less costly temporary saltwater barriers.

Although less costly, the temporary barriers have shortcomings. For one, the temporary barriers block navigation of the streams (the Neches River and Pine Island Bayou) and create an inconvenience for boaters. Additionally, the temporary barriers sometimes washout at the shoreline following large rains, and a section of the streambank is washed away, carrying away vegetation with the soil. This produces damage to the Big Thicket National Preserve.

A great deal of criticism has been raised by floodplain residents, who perceive the barriers to be the cause of flooding problems. Although independent studies have contradicted these claims, the protests have nevertheless increased in intensity.

These expressed concerns have caused delays in the granting of a Corps of Engineers permit to continue temporary saltwater barrier installations. LNVA has agreed to certain modifications of the design of future temporary barriers to allay some of the concerns of the protesters, each of which increases its cost and reduces its salt abatement capabilities.

The permanent saltwater barrier offers solutions to most of the protests being voiced. The structure would allow passage of boats, would not prevent migration of fish, would eliminate shoreline erosion and would not obstruct streamflows during potentially flooding conditions.

Probably the most noteworthy advantage of the permanent barrier is its tremendous freshwater conservation potential. Current saltwater abatement policy calls for releases of freshwater from storage in Sam Rayburn Reservoir in amounts large enough to meet user demands plus an amount sufficient to prevent upstream movement of saltwater. The volume of these salt abatement releases during several months of each year exceeds the combined municipal, industrial and agricultural needs of the lower Neches area. If there is insufficient water in storage to permit this level of releases, the temporary barriers must be installed to conserve the dwindling supply.

The permanent barrier would, by permitting conservation of this huge volume of fresh water, amplify a dependable water supply for southeast Texas far into the 21st

Century, assuring its residents of the most critical natural resource for jobs, development, preservation of the environment, and for economic recovery.

LNVA is optimistic that a financing arrangement within the means of the Authority may be possible. Toward that end, LNVA respectfully requests an appropriation of $150,000 to $200,000 to be used for the purpose of confirming the most affordable permanent barrier design and to reactivate the planning process by the Corps of Engineers.

STATEMENT OF THE CITY OF GALVESTON, TX

Dear Senator Johnston:

I am writing in support of the Galveston Harbor & Channel Project and urge full funding for this important project.

The Corps of Engineers Galveston District office has performed vital work and on behalf of the City of Galveston, we urge you to continue this planned project.

Also, it is important to mention that on behalf of the City of Galveston I oppose the proposed Reorganization Plan for the Galveston District office and I oppose any funding for this purpose. This District office, one of the most active construction of a new, larger headquarters building, was completed last year at a significant cost to the Federal Government. The economic impact of the Galveston District to our city as well as its long history here, underscores the negative effect of the proposed reorganization.

Thank you for your consideration and attention to these matters.

STATEMENT OF THE CITY OF LEAGUE CITY, TX

Dear Sir:

The Clear Creek Watershed is located in southeast Texas, south of Houston and is located in four counties including Brazoria, Fort Bend, Galveston and Harris. Sixteen cities, five drainage districts, and other political subdivisions are included in the planning area. Improvements to lateral drainage channels have been made in connection with the various developments that have taken place in the watershed and by the individual political entities which have jurisdiction. Extensive natural flood plains exist within the watershed and extend into large areas of existing commercial and residential development.

Currently, the U.S. Army Corps of Engineers (COE) has a flood control program which consists of channel enlargement, easing of bends within the existing main stream from the upper end of Clear Lake (3.8 mi) to the Brazoria/Galveston County line (18.5 mi), and a one-mile second outlet between Clear Creek and Galveston Bay. The level of protection from the COE plan corresponds to a 10-year flood frequency storm. Flood plain management in the residual flood plain would be required.

In addition to the COE program, the Texas Water Development Board and the Harris County Flood Control District have funded on a 50/50 basis a Regional Flood Planning Grant at a cost of $1.2 million. This regional flood control planning effort incorporates all the counties, cities, drainage districts and political subdivisions in an unprecedented coordinated effort between all entities with flood control jurisdiction.

The project started in April of 1989 and was divided into two phases. Phase One, established an updated hydraulic model and developed updated flood plain maps for the entire watershed and established the management program to be used for implementing improvement projects identified in Phase Two. Phase Two, started in December of 1990, investigated alternative design solutions including: no action, channelization, detention, non-structural, and/or a combination of alternatives. It also included a preliminary environmental assessment report. All phases of the plan are currently completed.

This Regional Flood Control Planning effort is in concert with the COE Plan. The final plan is based entirely on the completion of the COE plan. The large expenditure of effort and funds has been made by the Texas Water

Development Board, Harris County, and other jurisdictions within the Clear Creek Watershed. The City of League City, along with all other communities within this watershed, strongly support the federal government's effort and the continued funding of the Clear Creek project. Through your support, the continued funding of this project, and the planned watershed management efforts of the local jurisdictions, we will have the ability to protect over $6 million worth of property that is currently subject to regular flooding. Without the Clear Creek Watershed project, we have no ability to provide significant protection from future flood losses.

In closing, the City of League City is very grateful for the past support this committee has given to the Clear Creek Watershed project. With this past committee support and local support, we are now approaching channel construction. We believe that for the complete success of the entire project and the health and well-being of the Clear Lake Communities, Phase 1 of the channel construction must include the removal of the Missouri Pacific railroad bridge that presently restricts the channel. We also believe the proposed re-organizational plan for the COE Galveston District Office jeopardizes this project and we oppose any funding for this purpose.

STATEMENT OF THE CITY OF PORT ARTHUR, TX

Dear Mr. Chairman and Members of the Subcommittee

The people of Southeast Texas, especially those from Port Arthur, appreciate your willingness to receive us at this hearing today and to hear our support and justification for the energy and water development projects that are most important from our standpoint.

I. Gulf Intracoastal Waterway: This facility connects Port Arthur with Brownsville, Texas to the West and to the East, the Mississippi River, and all the way to Florida. It is a vital waterway for commerce and industry providing safe and economical transportation. We strongly support the Gulf Intracoastal Waterway improvements and funding requests.

II. Sabine-Neches Waterway: This federal waterway connects the ports in Port Arthur, Beaumont, and Orange to the Gulf of Mexico and the world. Crude oil, refined products, fuels and petrochemicals are transported via the waterway to and from points all over the nation and the world. It is crucial to the economic well-being of our country. We strongly support the Sabine-Neches Waterway.

III. Taylor's Bayou Project: Port Arthur supports this project because it will provide for flood control and drainage improvement to most of Western Jefferson County and Beaumont. We are in union with Jefferson County, it's Drainage Districts, and Beaumont in supporting the funding for this project.

Please note also that we are going on record opposing efforts to modify the Corps of Engineers' proposed reorganization of the Galveston District Office. Our area of Texas is uniquely complicated and technically developed--downgrading the district office would be very detrimental to us.

Thank you for your attention and consideration to our area's needs and requests.

PREPARED STATEMENT OF CONGRESSMAN NATCHER OF KENTUCKY

Senator JOHNSTON. Before calling the next Texas group, I want to include in the record the detailed prepared statement of Chairman Natcher of the Houe Appropriations Committee.

[The statement follows:]

STATEMENT OF CONGRESSMAN WILLIAM H. NATCHER OF KENTUCKY

Mr. Chairman, I appreciate the opportunity to appear at this time in behalf of our projects in Kentucky. As you have heard me say on many occasions, we appreciate your assistance all down through the years. You and the members of your committee have been good to us and we appreciate it.

The Salt River basin study was authorized in the year 1964 and as a result of this study, three projects were recommended. These projects are the Taylorsville Reservoir, Campground Reservoir, and Howardstown Reservoir. For many years, we have had serious floods in this section of Kentucky and Lebanon Junction, New Haven, Boston, Colesburg, Bardstown, and Fredericktown are all located in this section and have suffered annual serious damage from floods. With your help we constructed the Taylorsville Reservoir and over $800,000 has been expended for studies on the Campground Reservoir. If these reservoirs were constructed, the three rivers involved would be under control and we would no longer have the serious damage that we suffer from annually. Two of our Governors refused to enter into agreements with the Corps of Engineers on the Campground and Howardstown projects. Since the investigation and studies began on the Campground project, the Flood Control Act of 1986 was enacted. We are still suffering severe flood damages and I would like to suggest that $300,000 be placed in the bill for fiscal year 1994 for a continuation of the study in the Salt River basin with emphasis placed on projects which would be of assistance in eliminating the flood damages from the communities that I have set forth in this statement.

If approved, the amount requested would assist the communities in identifying funding alternatives, projects sponsorship, future course of damage abatement and in general preparing these communities for future permanent solutions to their damage problems.

At the time the Taylorsville Reservoir was constructed, two historic buildings designated as the Yates House and the Ashes Creek School were on land that was purchased by the Corps of Engineers and located within the Taylorsville impoundment area. Upon completion of the dam the two buildings were moved to a section of land closer to the dam site. At the time of the purchase of the land upon which the buildings were located, the Corps of Engineers advised the people in Spencer County where the reservoir is located that the Federal Government would restore and maintain ownership of the facilities and provide the necessary roads in and out of the final location selected.

So far, the buildings have not been restored due to lack of funding and the amount required would be $420,000. If approved, this amount would support and take care of the site preparation, landscaping, parking, utilities and access road. I do hope that this amount can be placed in the 1994 fiscal year bill to be used to restore and locate these two historic buildings.

For a number of years now your committee has appropriated funds for the green and barren river study. The five dams constructed in the years 1835 to 1838 on Barren and Green Rivers were later turned over to the Federal Government for maintenance and operation and the transaction between the Corps of Engineers and the legislature of the Commonwealth of Kentucky was sometime along about the year 1878. Since that time and just prior to the study that has been underway, one of the five dams located at Woodbury, Kentucky on the Green River where the Barren River empties in, washed out. These locks and dams are below the Barren and Green River Reservoirs. Both rivers are now in bad shape and the banks are washing away and since Green River is a navigable stream with coal barges and other commodities shipped on a daily basis, a dam should be erected in the vicinity of Rochester and Woodbury. Erection of this dam would eliminate the lock and dam site at Woodbury and the lock and dam at Rochester. I have been advised that there is the sum of some $325,000 available from the 1993 fiscal year funding that is available at this time. Mr. Chairman, this $325,000 should be used to continue the flood control study of the Green and Barren Rivers.

A number of years ago we canalized Green River for 102 miles with the channel being nine feet deep and 200 feet wide. The project began at the number one dam on Green River known as Spottsville, and continued upstream beyond Calhoun Lock and Dam. Conditions of this river above this section are now almost undescribable.

Mr. Chairman, if the sum of $500,000 were placed in the bill for fiscal year 1994 to be used for bank protection at Brandenburg, Kentucky and reconstruction of the ramp, we would have better control and protection on the Ohio River. This condition has existed now for a number of years and the local community will comply with the requirements of existing law.

Mr. Chairman, I respectfully request that the projects and funding set forth in the budget for fiscal year 1994 for Kentucky be approved and I want to join with all of my colleagues from Kentucky in the House and in the Senate in their requests for our State and their districts.

Again, Mr. Chairman, we want to thank you and the members of the subcommittee for permitting us to appear at this time in behalf of our projects.

TRINITY RIVER BASIN, TEXAS, PROJECTS

STATEMENT OF PRESTON M. GEREN, JR., CHAIRMAN, TRINITY IMPROVEMENT ASSOCIATION

Senator JOHNSTON. Now, we have the Trinity Improvement Association. Preston Geren is chairman. And I understand that Megan Olivier is the real star today, because this is her 12th birthday and her first time in Washington.

Where is Megan?

There is Megan. Happy birthday. [Applause.]

Glad to have you here, Megan.

And Preston, we will hear from you at this time.

Mr. GEREN. Thank you so much, Mr. Chairman. My name is Preston Geren of Fort Worth, TX. I am chairman of the Trinity Improvement Association and have been asked to serve as spokesman for this delegation, which represents interests throughout the Trinity River basin and also the city of Houston, which is outside the basin, but is a beneficiary of water from the Trinity basin.

The delegates include mayors and council members, officers of river authorities and water districts, port commissioners and water utility managers, and chamber of commerce and other service organizations officials. I might add that all have traveled to Washington at their own expense, with the Trinity Improvement Association serving as the coordinator. While the group is diverse geographically, we are united in our purpose.

You have heard testimonies from congressional Representatives in the past. We do not have those here with us today, but we want to present specific comments and recommendations on the fiscal year 1994 budget proposals.

In regard to the budget for civil works for the Corps of Engineers, we are testifying this year without the benefit of knowing details of the new administration's request. However, we continue to believe water is one of our Nation's most valuable resources. Water projects create the infrastructure upon the quality of which our life and economic growth depend. Our Nation cannot survive without water. And economic prosperity cannot occur without a plentiful water supply. Improving water quality and providing flood control are also infrastructure projects which should have a high priority for Federal funding.

We support funding of projects in the Trinity River basin at the levels of capability expressed by the U.S. Army Corps of Engineers for fiscal year 1994. If, in the wisdom of Congress, a stimulus program is enacted, we are persuaded that one of the best sources of viable projects is the Corps of Engineers civil works program. Both new construction and maintenance projects have been thoroughly studied and evaluated and these could be implemented without delay.

We urge this committee to provide the leadership necessary to revise the cost-sharing rules of the current civil works program so as to realistically evaluate the benefits along with each local sponsor's ability to pay.

Finally, Mr. Chairman, I wish to point out for the record that a complete list of our delegation here today and copies of their testimony to be given by our group is submitted to the committee.

With these remarks, I would like to call on a few members of the delegation who will speak briefly on projects of specific importance to their areas.

[The information follows:]

LIST OF DELEGATES

Trinity Improvement Association: Mr. Preston Geren, chairman; Mr. Julian Wakefield, director; Mr. and Mrs. H.L. (Rip) Byrd, director; Mr. and Mrs. Robert Bruner, director; Mr. Grady Wakefeld, director; Mr. Charles Lively, executive vice president; Mr. I.M. Rice, immediate past exec. vice president; and Ms. Sue Wiese, office manager.Trinity River Authority of Texas: Mr. Walter Erwin, president; and Mr. J. Sam Scott, executive services manager.

Port of Liberty Commission: Mr. and Mrs. Art Parks, (Denise), commissioner; Mr. John Hebert, commissioner; Mr. Ernie Zieschang, commissioner; and Mr. Jeff Winter, director.

Tarrant County Water Control and Improvement District No. 1: Mr. Charles Campbell, director; Mr. Charles Geren, director; Mr. Jim Oliver, general manager; and Mr. Wayne Owen, management services manager.

North Central Texas Council of Governments: Mr. Gary Skaggs, chairman; and Mrs. Nancy Pascale, assistant to director, Environmental Resources. North Texas Municipal Water District: Mr. Loncy Leake, director.

City of Dallas: Hon. Larry Duncan, councilman; and Mr. Mike Marcotte, director, water utilities. City of Denton: Hon. Bob Castleberry, mayor; and Mr. Bob Nelson, executive director, utilities administration. City of Grand Prairie: Hon. Edward Hemphill, councilmember; and Mr. Craig Farmer, deputy city manager. City of Houston: Mr. Frederick Perrenot, director, public utilities. City of Huntsville: Hon. and Mrs. Bill Hodges (Ann), mayor. City of Irving: Hon. Fran Bonilla, mayor pro tem; Hon. George Susat, councilman; and Mr. Lewis Patrick, public works director.

County of Polk: Hon. John P. Thompson, judge, County of Walker: Hon. B.J. Gaines, commissioner; and Hon. James (Buddy) Reynolds, commissioner.

Other individuals: Mr. Tom Baker, executive vice president, Texas Utilities Electric; and Miss Megan Oliver c/o Jim Oliver, Tarrant County WC&ID No. 1.

STATEMENT OF WALTER ERWIN, PRESIDENT, TRINITY RIVER AUTHORITY

Mr. GEREN. Our first speaker is Mr. Walter Erwin, president of the Trinity River Authority.

Mr. Erwin.

Mr. ERWIN. I am Walter Erwin of Ennis, TX. I serve as the president of the board of directors of the Trinity River Authority.

What follows is a shortened version of the authority's full statement, which has been submitted for the record. The authority fully supports the levels of capability expressed by the Army Corps of Engineers for projects located within the Trinity River basin for fiscal year 1994.

Flooding has been the rule rather than the exception in the last several years and the lower Trinity River basin has been the focus of a $1.4 million Federal study related to this problem. At this point, the preliminary results of this study have been released and a number of possible projects that would minimize the impact of flooding have been identified.

Because of the limited financial means of governmental entities in the Trinity basin, it would appear unlikely that anything further will occur in the form of additional studies or project development despite the compelling need for relief. Because of the public need, we ask the committee to consider working with local governments on a realistic scheme for feasibility study and project development cost sharing. The largely rural counties involved in lower Trinity River flooding have a real problem, but they may not be able to meet the existing requirements in order to minimize flood damage.

WALLISVILLE LAKE, TX

The long-delayed Wallisville project is finally back under construction after the first $3.3 million construction contract was awarded. The Corps has expressed the capability to expend an additional $1 million for work during fiscal year 1994. The Trinity River Authority urges your support for an appropriation of this amount.

The authority thanks you for this opportunity to testify. The Federal investment in water resources has made our basin a much better place to live. Thank you very much.

[The statement follows:]

STATEMENT OF WALTER ERWIN

Mr. Chairman and members of the committee, I am Walter Erwin of Ennis, Texas. I currently serve as president of the Trinity River Authority's board of directors.

The authority fully supports the levels of capability expressed by the U.S. Army Corps of Engineers for projects located within the Trinity River for FY 1994.

Lower Trinity River reconnaissance study

Flooding has been the rule rather than the exception for the last several years, and the lower Trinity River basin has been the focus of a $1.4 million Federal reconnaissance study related to this problem. At this point, the preliminary results of this study have been released, and despite the stringent standards applied, a number of possible projects that would minimize the impact of Trinity River flooding have been identified.

Because of the limited financial means of governmental entities in the study area, it would appear unlikely that anything further will occur in the form of additional studies or project development despite the compelling need for relief. Because of the public's need, we ask this committee to consider totally waiving the requirements for local cost sharing or, if that is not possible, working with local governments on a more realistic scheme for feasibility study and project development cost sharing. The largely rural counties involved in lower Trinity River flooding have a substantial problem, but they cannot be required to bankrupt future generations of residents in order to minimize flood damage.

Upper Trinity River feasibility study

The Corps of Engineers has expressed the capability to beneficially spend an additional $830,000 during FY 1994 on the upper Trinity River flood feasibility study. Trinity River authority supports this important work effort and can only cite the broad regional and state support that has been continuously expressed as evidence of its importance.

Trinity River and tributaries

High flows in the lower Trinity River basin for the last few years have both compounded the need for federally funded river dredging and made it nearly impossible to perform. For FY 1993, a total of $1,060,000 was appropriated for channel maintenance and more will be necessary for FY 1994. At this point, the river is basically impassable to the Port of Liberty at river mile 46. It would be appropriate if this committee would include language directing the corps to spend these funds on lower Trinity River maintenance at the first opportunity that weather and river flow conditions permit.

Wallisville saltwater barrier

Resumption of this long delayed project is finally underway after a $3.3 million construction contract was awarded. The corps has expressed the capability to expend an additional $1 million for work during FY 1994. The authority urges your support for an appropriation of this amount.

Operation and maintenance funds

The Corps of Engineers has requested, and TRA supports, appropriations for FY 1994 operations and maintenance funds for: Bardwell Lake, Joe Pool Lake, Navarro Mills Lake, and the Wallisville saltwater barrier.

Conclusion

The Trinity River Authority thanks you for this opportunity to testify. The Federal investment in water resources has made our watershed a better, more liveable area. We are profoundly grateful for this opportunity to express our needs.

UPPER TRINITY RIVER BASIN FEASIBILITY STUDY

STATEMENT OF GARY SKAGGS, CHAIRMAN, TRINITY CORRIDOR STEERING COMMITTEE, NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

Mr. GEREN. Thank you. Our next speaker will be Mr. Gary Skaggs of the North Central Texas Council of Governments.

Mr. SKAGGS. Thank you, Mr. Chairman. Our written comments have been submitted and, therefore, I will abbreviate my comments here today. I am pleased to be here today on behalf of the North Central Texas Council of Governments.

As chairman of the Trinity River Corridor Steering Committee, I am representing the nine cities, three counties, and two special districts who have been cooperating with the U.S. Army Corps of Engineers over the last several years in pursuit of a common vision for the Trinity River corridor.

We address you here today in support of the Corps of Engineers funding request for the 50-percent Federal share in the Upper Trinity River basin feasibility study expected to be included in the President's fiscal year 1994 budget proposal.

The interjurisdictional nature of the Trinity River defines our goal and our purpose to work in a cooperative fashion to maintain and improve the quality of life along its banks. I am pleased to report that we have been doing so for the past several years.

The 1990 upper Trinity River reconnaissance study showed that communities along the Trinity River in the Dallas/Fort Worth area would suffer more than $4 billion in property damages if a standard project flood occurred today. Recent flood damages have been extensive, notably in 1990, exceeding $300 million and 350 homes damaged in the Rochester Park area of Dallas. Fortunately, the reconnaissance study also identified more than a half a dozen viable projects which would lessen these unacceptable flood damages.

The affected local governments have committed to a more stringent permitting process which will ensure that the existing flooding risks does not worsen. The corridor development certificate process has been defined, approved and is nearing full implementation by member governments.

Also by the committee's direction, the vital mapping element of the feasibility study has reached the final stages, upon which the next phase of the study exploring specific alternative plans depends.

The National Park Service is also assisting in the development of greenways and trail alternatives, also a part of the feasibility study. This cooperative agreement throughout the area provides for a rivers and trails assistance program, the budget for which is also under review for fiscal year 1994 appropriations.

The State of Texas is committed to a 25-percent share of the feasibility study funding through the Texas Water Development Board. The local government participants are ready with our share. We will appreciate your continued help through Federal cross-sharing of this feasibility study to identify implementable projects which can reduce damage to property and minimize loss of life.

Thank you.

Mr. GEREN. Thank you very much.

[The statement follows:]

STATEMENT OF GARY SKAGGS

Mr. Chairman and members of the committee, my name is Gary Skaggs. I am pleased to be here today on behalf of the North Central Texas Council of Governments. As chairman of NCTCOG's Trinity River corridor steering committee, I am representing the cities, counties, and special districts who have been cooperating with the U.S. Army Corps of Engineers over the last several years in pursuit of a common vision for the Trinity River corridor. We address you today in support of the Corps of Engineers funding request for the 50-percent Federal share in the upper Trinity River basin feasibility study to be included in the President's FY94 budget proposal.

NCTCOG's Trinity River corridor steering committee consists of elected officials representing nine cities, three counties, and two special districts in the corridor. The interjurisdictional nature of the Trinity River defines our gqal and purpose—to work in a cooperative fashion to maintain and improve the quality of life along its banks. I am pleased to report that we have been doing so for several years.

The 1990 Upper Trinity River reconnaissance study showed that communities along the Trinity River in the Dallas/Fort Worth area would suffer more than $4 billion in property damages if a standard project flood occurred today. Recent flood damages have been a extensive, notably in 1990, exceeding $300 million and 350 homes damaged in Rochester Park in Dallas. Fortunately, the reconnaissance study also identified more than a half-dozen viable projects which could lessen these unacceptable flood damages.

The affected local governments have committed to a more stringent development permit process which will insure that the existing flooding risk does not worsen. This corridor development certificate (CDC) process has been approved by the Trinity steering committee, following extensive boundary setting activities and delopment of the CDC manual and procedures. The cities of Farmers Branch and Coppell both recently acted to implement the CDC, to be followed soon by the other participating municipalities, reportedly in the near future including the cities of Irving and Dallas. Full implementation of the CDC represents local commitment as one of the most critical elements to the success of the feasibility study.

Through NCTCOG's direction, the vital mapping element of the feasibility study has reached final stages, upon which the next phases of the study exploring specific alternative plans depends. The Trinity River engineering mapping data is available to local governments and the general public, based on completed blueline copies of the 1 inch equals 200 feet data sheets with mylar originals available through the NCTCOG public affairs department. Digital copies of the data will also be made available.

During the latter part of 1992, a series of eight public meetings across the Trinity River corridor were hosted by the NCTCOG and Corps of Engineers Fort Worth District to review the state of the feasibility study and describe potential study alternatives that my be evaluated in the study. At these workshops, drafts of topical "working papers" were shared, representing initial plan formulation efforts. Attendees discussed several priority topics, including structural and nonstructural flood damage reduction strategies, the concept of a regional flood warning systems, greenways, and trails along the river, natural and cultural resources, transportation needs, and water quality. Given this wide spectrum of needs and interests, an important topic reviewed was the use of a multiple objective management (MOM)approach.

Building on the public discussion of greenways and trials, NCTCOG is leading the way in the creation of an exciting vision under development with other governmental agencies and local organizations—at this time called the All-Ways Plan: Greenways, Bikeways, Walkways, and Parkways for North Central Texas. A series of workshops to launch this initiative in conjunction with the feasibility study is planned for May 1993.

The National Park Service is assisting NCTCOG in the development of greenways and trails alternatives in the feasibility study in a cooperative agreement through the rivers and trails assistance program, the budget for which is also under review for FY94 appropriations. As part of this effort, the Park Service has created a popular map showing recreational facilities in the upper Trinity corridor, entitled "Outdoor Opportunities Along the Trinity River."

The State of Texas is committed to a 25-percent share of the feasibility study funding through the Texas Water Development Board. The local government participants are ready with our share. We will appreciate your continue help, through federal cost-sharing of the feasibility study, to identify implementable projects which can reduce damage to property and minimize loss of life.

Thank you.

STATEMENT OF LARRY DUNCAN, COUNCILMAN, CITY OF DALLAS, TX

Mr. GEREN. Mr. Chairman, our next speaker will be the Honorable Larry Duncan of the city of Dallas.

Mr. DUNCAN. Mr. Chairman, members of the Committee, my name is Larry Duncan. I am a councilmember from the city of Dallas. On behalf of the mayor and the entire city council, we wish to express our appreciation for your continuing support for critical flood control projects affecting our citizens and those of our neighbors. Particularly, we are emphasizing our request for special legislation this session which would credit the city of Dallas for funds we have already spent on flood control projects that were part of the 1965 authorized Federal flood control project.

During the years 1989 through 1992, we had a series of devastating floods in Dallas, affecting particularly the Rochester residential neighborhood and the city central wastewater treatment plant. The Corps could not begin construction on the needed flood control measures until 1998. Because of the immediate problems we faced, the city of Dallas went ahead with construction—$13.1 million levee system for the Rochester area and a $10.9 million levee system and improvements for the flood control measures at the central wastewater treatment plant. These will be completed in April 1993 and June 1995, respectively.

Both of these projects, again to emphasize, are basic elements of the 1965 authorized Federal flood control project, in which the Federal Government would have paid a significant share, typically over 50 percent for the construction. Special legislation is not necessary for the city to be eligible for credit on the cost incurred in the construction of these two levees. This credit would reduce the city's share for constructing the remaining Federal flood control projects, to be determined in the Corps' Dallas floodway extension restudy.

Additionally, I am requesting the committee's support for the fiscal year 1994 for continuing construction on the Ray Roberts Lake project. I urge your careful consideration and your approval for these critical flood control projects for the Dallas area and our neighbors.

And I want to again thank you for the time to testify today and for your consideration.

Mr. GEREN. Thank you very much.

[The statement follows:]

STATEMENT OF LARRY DUNCAN

Mr. Chairman and members of the committee, my name is Larry Duncan and I am a councilman from the city of Dallas, Texas. Let me express my appreciation, as well as that of the Dallas City Council, for your committee's continued support for water projects affecting the citizens of Dallas and its neighbors, as well as the Ray Roberts Lake project.

I am requesting your support of special legislation this session which will credit the city of Dallas for funds spent on construction of flood control projects that are part of the 1965 authorized Federal flood control project for extending the Dallas Floodway. A series of four floods occurred in the period from 1989 to 1992. During these floods, extensive damages resulted from flooding of Rochester Park, a residential area in southwest Dallas, and the city's central wastewater treatment plant.

The city of Dallas requested the U.S. Army Corps of Engineers (corps) to reactivate the Dallas Floodway extension project in September 1989 due to the flooding problems. The corps initiated a restudy in January 1991 and, according to their current schedule, they would be able to begin construction of the flood control project in early 1998.

Due to the immediate needs to provide flood protection for the areas being flooded, the city of Dallas authorized the construction of a $13.1 million levee system for the Rochester Park area in November 1990, and a $10.9 million levee improvement for the central wastewater treatment plant in May 1992, and will complete these projects in April 1993, and June 1995, respectively.

Both of these flood control projects are basic elements of the 1965 authorized Federal flood control project, in which Federal funds would have paid for a significant share (over 50 percent) of the construction, if the project had been funded, or if the city had elected to wait for completion of the Dallas Floodway extension restudy.

Special legislation is now necessary for the city to be eligible for credit on the cost incurred in the construction of these two levees. This credit would reduce the city's share for consfructing the remaining flood control project, the amount to be determined by the Corps' Dallas Floodway extension restudy. The passage of this legislation will enable the city of Dallas to expedite completion of a Federal flood control project urgently needed to provide flood protection to the citizens of Dallas.

Additionally, I request your support of the fiscal year 1994 capability of the Corps of Engineers for continuing construction of the Ray Roberts Lake project. With your approval of this funding, the project can remain on schedule. Any cutbacks could mean a delay in the timely completion of this project.

We urge careful consideration and approval of the administration's requests for these projects that will provide a source of water supply, recreation and flood protection for current as well as future citizens.

Thank you for providing this time to testify before the committee. Your support for these urgently needed projects is appreciated.

RAY ROBERTS LAKE, TX

STATEMENT OF BOB CASTLEBERRY, MAYOR, CITY OF DENTON, TX

Mr. GEREN. Our next speaker is Bob Castleberry, mayor of the city of Denton.

Mr. CASTLEBERRY. Mr. Chairman and members of the Committee, my name is Bob Castleberry and I am the mayor of the city of Denton, TX.

On behalf of the city council and citizens of Denton, I request that the administration's fiscal year 1994 budget include continued funding for the Ray Roberts Lake Project. Denton and Dallas cosponsored this project, and have contracted with the Corps of Engineers for the design and construction to produce a dependable water supply with 76 million gallons per day. This project is necessary to provide water, flood protection and recreation for our cities.

The Army Corps of Engineers' Ray Roberts project budget includes funding for the completion of the project fencing, the completion of construction management activities, and the engineering, design, and land acquisition activities for the greenbelt corridor development. The committee's continued support of the Army Corps of Engineers fiscal year 1994 budget request will allow all parties involved, the Federal Government, the city of Dallas, and the city of Denton to work toward the timely completion of this project. Any cutbacks would bring delays in project completion and would hamper us in meeting the water and recreational needs of our region.

Thank you for the opportunity to testify before this committee. The citizens of Denton stand ready to do our part as local sponsors to successfully complete the Ray Roberts project.

We look forward to your continued support in these important matters. Thank you.

COOPER LAKE AND CHANNEL, TEXAS

STATEMENT OF LONCY LEAKE, DIRECTOR, NORTH TEXAS MUNICIPAL WATER DISTRICT

Mr. GEREN. Thank you, Mayor.

Mr. Chairman, our next speaker is Loncy Leake of the North Texas Municipal Water District.

Mr. LEAKE. Thank you. Mr. Chairman, my name is Loncy Leake, and I am a member of the board of directors of the North Texas Municipal Water District.

This committee has been kind enough to support the Cooper Lake project since its original authorization in the 1950's. Last year, testimony confirmed that the Cooper Reservoir is now full and work is well underway on the pipeline and associated facilities necessary to provide water to the city of Irving and the North Texas Municipal Water District.

We respectfully request that additional funds to appropriated to allow the completion of the project features which will do much to benefit the people of our area. These funds would be used to complete real estate acquisition for mitigation area development at White Oak Creek, construction of recreational facilities, and initiation of shoreline erosion control. It is our understanding that $10 million will be needed in the coming year.

We do appreciate the support of this committee. We hope that you will be able to continue to appropriate funds for these needed projects and uphold the policies as reflected in the Water Supply Act of 1958.

Thank you for your attention and consideration.

Senator JOHNSTON. Thank you.

Mr. GEREN. Thank you, Loncy.

[The statement follows:]

STATEMENT OF LONCY LEAKE

Mr. Chairman and members of the committee, my name is Loncy Leake and I am a member of the board of directors of the North Texas Municipal Water District. I have had the opportunity to serve on the board of directors since 1960 as a representative appointed by the city council of the city of Mesquite, Texas.

This committee has been kind enough to support Cooper Lake project since its original appropriation in the 1950's. Last year, testimony confirmed that Cooper Reservoir is now full and work is well underway on the pipeline and associated facilities necessary to provide water to the city of Irving and the North Texas Municipal Water District, two of the local sponsors of the project.

We respectfully request funds be appropriated to allow for the completion of project features which will do so much to benefit the people of our area. These funds will be used to complete real estate acquisition, mitigation area development at White Oak Creek, construction of recreational facilities and initiation of shoreline erosion control. It is our understanding that ten million dollars is needed in the coming year.

The completion of the project will preclude critical water quality and quantity problems a drought situation might have caused, and will provide NTMWD adequate time to develop the water supply sources needed to provide a safe, dependable water supply for future generations.

Again, we appreciate the support of the committee. We recognize the funds appropriated for this and other multi-purpose projects are an investment in the future of America. We hope you will be able to continue to appropriate funds for these needed projects and uphold the policies as reflected in the Water Supply Act of 1958.

Thank you for your attention and consideration.

STATEMENT OF GEORGE SUSAT, COUNCILMAN, CITY OF IRVING

Mr. GEREN. Mr. Chairman, our next speaker is George Susat of the city of Irving.

Mr. SUSAT. My name is George Susat. I am a councilman for the city of Irving, TX, home of the Dallas Cowboys.

Let me express the appreciation of the mayor and the members of the Irving City Council for the committee's continued support of the Cooper Lake project. Another project that is vital to the citizens of the Dallas/Fort Worth area is the upper Trinity basin feasibility study. Last year we requested and received help from the committee to provide funds for the Corps of Engineers to continue studies to recommend actions needed to prevent catastrophic flood which might occur in the future.

In the interests of time, thank you for your attention.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF GEORGE SUSAT

Mr. Chairman and members of the committee, my name is George Susat, and I am a councilman from the city of Irving, Texas. Let me express the appreciation of the mayor and city council of Irving for the committee's continued support of the Cooper Lake project. Funding of the Corps of Engineers will allow the corps' stated capability for FY 1994 to proceed in a timely manner with the construction of the project. As one of the local sponsors of the project, we are anxious to utilize water from Cooper Lake at the earliest time it becomes available.

Another project that is vital to the citizens in the Dallas/Fort Worth area is the upper Trinity River basin feasibility study. Last year, we requested and received help from the committee to provide funds for the Corps of Engineers to continue studies to recommend actions needed to prevent catastrophic flooding in the area covering nine cities, three counties and two special districts.

The FY 1994 budget will contain a request for funds to be used through Federal cost-sharing for continuing feasibility studies to identify projects that can be achieved to offer flood protection to the affected areas.

We urge your favorable consideration of the projects I have just described and support funding at the levels of capability expressed by the Corps of Engineers. We are grateful for the support you have given us in the past. We firmly believe the Federal Government's continued participation in these water resource projects constitutes wise and prudent use of the Nation's resources.

Thank you for your kind attention.

UPPER TRINITY RIVER BASIN STUDY

STATEMENT OF CHARLES GEREN, DIRECTOR, TARRANT COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 1

Mr. GEREN. Senator Johnston, I am pleased now to introduce my other son, Charles Geren, who is the director of the Tarrant County Water Control District, to make his comments.

Mr. CHARLES GEREN. Mr. Chairman, my name is Charlie Geren and I am a member of the board of directors, Tarrant County Water Control and Improvement District No. 1.

Our district operates the four major water supply reservoirs that supply the Fort Worth, Arlington, and virtually all of Tarrant County, as well as operating and maintaining a series of levees, sump areas, and floodgate structures which comprise the Fort Worth Floodway, along the West and Clear Forks of the Trinity.

We come here today to testify in support of continued appropriations to the Fort Worth District of the Corps of Engineers. The Fort Worth District is currently performing a major feasibility study, the extensive scope of the 5-year upper Trinity feasibility study program makes continued funding vital to maintaining its scheduled completion. The program is currently in its third year. State and local funding of this project continues to be supported in the face of difficult economic conditions in north central Texas.

We respectfully request your continued support of Federal funding for this study.

As an elected official representing Tarrant County citizens, I respectfully request this subcommittee continue to support the Fort Worth District of the U.S. Army Corps of Engineers in the upcoming fiscal year 1994 budget and that the funds continue to be appropriated for the upper Trinity River feasibility study.

Thank you, sir.

Senator JOHNSTON. Thank you.

[The statement follows:]

SATEMENT OF CHARLES B. CAMPBELL, JR.

Mr. Chairman and members of the committee, my name is Charles B. Campbell, Jr. and I am secretary of the board of directors of Tarrant County Water Control and Improvement District No. 1. Our district operates the four major water supply reservoirs that supply Fort Worth, Arlington, and virtually all of Tarrant County with raw water. We also operate and maintain the series of levees, sump areas and floodgate structures which comprise the Fort Worth Floodway, along the West and Clear Forks of the Trinity River.

We come here today to testify in support of continued appropriations to the Fort Worth District of the Corps of Engineers. The Fort Worth District is currently performing a major feasibility study which will evaluate several structural and nonstructural flood control alternatives which have been preliminarily identified as necessary to maintain the required level of flood protection in the Fort Worth-Dallas area.

The extensive scope of the five (5) year upper Trinity feasibility study program makes continued funding vital toward maintaining its scheduled completion. The program is currently in year three (3). State and local funding of this project continues to be supported in the face of difficult economic conditions in north central Texas. We respectfully request your continued support of Federal funding for this study.

Several recent flood events in north central Texas accentuate the need for this current flood control planning effort. I come to you today acutely aware of the problems associated with flooding. Damages occurred in rural areas surrounding our water supply reservoirs as well as in urban areas associated with the floodway.

Information provided by the Corps of Engineers indicates that, had the flood control improvements now currently in place not existed, flooding beyond record proportions experienced in 1908 would have resulted. The current Corps of Engineers' study is evaluating structural alternatives that, if feasible, would improve the Fort Worth Floodway.

As an elected official representing Tarrant County citizens, I respectfully request this subcommittee continue to support the Fort Worth District of the U.S. Army Corps of Engineers in the upcoming fiscal year 1994 budget and that funds continue to be appropriated for the upper Trinity River feasibility study.

Thank you.

LOWER TRINITY RIVER BASIN RECONNAISSANCE STUDY

STATEMENT OF BILL HODGES, MAYOR, CITY OF HUNTSVILLE

Mr. GEREN. My next speaker is Bill Hodges, mayor of the city of Huntsville.

Mr. HODGES. Mr. Chairman, my name is Bill Hodges and I am the mayor of Huntsville, TX. Over a period of many years, I have observed the loss of life and property caused by flooding along the Trinity River.

My purpose in appearing before you is to thank you for providing funds for the lower Trinity River basin flooding reconnaissance study. The flooding problem that prompted this study still exists. We support feasibility studies to develop projects being recommended to help reduce the threat of more damage and loss of life.

Unfortunately, the cost of the local share of the further studies and projects will be expensive. While we stand ready to bear our part of the burden, the current cost-sharing rules make it difficult to find a local sponsor who can afford these expensive undertakings.

This part of the Trinity River basin has tens of thousands of acres that are tax exempt due to land owned by the National Forest Service and the Texas prison system. Rural areas, whose economic base is largely agricultural, simply do not have the ability to pay the local share, even though the necessity for these projects is well documented.

Therefore, we ask you to include language in fiscal year 1994 appropriations documents instructing the Corps of Engineers through the Secretary of the Army to loosen the current cost-sharing rules for areas such as the middle Trinity and take into account the ability to pay when establishing the local cost share for continuing efforts in solving the catastrophic flooding problems which continue to exist throughout the lower Trinity River basin.

Thank you.

Mr. GEREN. Mr. Chairman, our next speaker is Ernie Zieschang, Port of Liberty Commission, and also the editor of the newspaper.

TRINITY RIVER CHANNEL MAINTENANCE

STATEMENT OF ERNIE ZIESCHANG, COMMISSIONER, PORT OF LIBERTY

Mr. ZIESCHANG. Mr. Chairman, my name is Ernie Zieschang. I am testifying as a representative of the Port of Liberty Commission.

Our commission is grateful for the financial support you and your committee have provided for dredging of the lower Trinity

River over the years and the positive impact it has had on the economy of our entire region.

Only a portion of the funds secured last year were used to dredge the lower portion of the Trinity River Channel. Mother Nature and scheduling prevented the U.S. Army Corps of Engineers from completing the maintenance dredging to the Port of Liberty.

It is necessary that we request $1.5 million to be included in the fiscal year 1994 budget to continue the maintenance dredging of the Trinity River Channel to the Port of Liberty. Our area desperately needed dependable barge transportation to Liberty.

We appreciate all the assistance of the Government in our efforts to help solve the flooding problems on the Trinity River. We would hope that due to the economic situation of our area consideration would be given to a more favorable local cost-sharing formula.

Liberty County currently is experiencing a 14-percent unemployment rate. We need a plan that does not put such a financial burden on our community.

The widening, straightening, and deepening of the lower Trinity River is desperately needed to alleviate the hardships resulting from the flooding of our citizens.

We support the continued construction of the Wallisville Reservoir. This will benefit both navigation and agricultural production in our area.

Thank you for your favorable consideration. We look forward to your continued encouragement, support, and action to fund our Trinity River projects.

Thank you.

[The statement follows:]

STATEMENT OF JOHN HEBERT

Mr. Chairman and members of the committee, my name is John Hebert and I am testifying as a representative of the Port of Liberty Commission.

Our commission is eternally grateful for the financial support this body has provided for dredging of the lower Trinity River over the years and the positive impact it has had on the economy of our entire region. Only a portion of the funds secured last year were used to dredge the lower portion of the Trinity River channel. Mother Nature and scheduling prevented the U.S. Army Corps of Engineers from completing the maintenance dredging to the Port of Liberty.

It is necessary that we request $1.5 million be included in the 1994 budget to continue the maintenance dredging of the Trinity River channel to the Port of Liberty. It is presently estimated that over 500,000 cubic yards of silt needs to be dredged to re-open our channel. We have a sand mining operation in the port area that is currently unable to barge sand due to the tremendous amount of silt deposited at the entrance to the Port of Liberty. Our area desperately needs dependable barge transportation to Liberty.

The Corps of Engineers is currently studying the possibiles of a new method of dredging the river which will be more cost effective. The new procedure, together with the use of "windows of navigation," will allow traffic on the Trinity River on a dependable basis.

We appreciate all of the assistance of the Government in our efforts to help solve the flooding problems on the Trinity River. We would hope that, due to the economic situation in our area, consideration would be given to a more favorable local cost sharing formula. Liberty County currently is experiencing a 14-percent unemployment rate. We need a plan that does not put such a financial burden on our community.

The widening, straightening, and deepening of the lower Trinity River is desperately needed to alleviate the hardships resulting from the flooding of our citizens.

We support the continued construction of the Wallisville Reservoir this will benefit both navigation and agricultural production.

Thank you for your favorable consideration. We look forward to your continued encouragement, support, and action to fund our Trinity River projects.

WALLISVILLE LAKE, TX

STATEMENT OF FRED PERRENOT, DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES, CITY OF HOUSTON

Mr. GEREN. Mr. Chairman, I would like to introduce now Mr. Fred Perrenot of the city of Houston, beneficiary of our water supply from Trinity.

Mr. PERRENOT. Mr. Chairman, I am Fred Perrenot, the director of the department of public utilities in Houston. In the interests of time, I am going to summarize my written comments.

I would like to express Houston's appreciation for this committee's long support for the Wallisville saltwater barrier, and I want to assure this committee that this project remains a high priority in Houston's planning for the future out past the turn of the century.

In fact, even with a major effort to conserve the available ground and surface water supplies, the water supplies will only meet our area's needs out to the year 2008 without the Wallisville saltwater barrier. The Wallisville saltwater barrier will meet our water needs out to 2030.

The city of Houston supports the Corps of Engineers and their expressed capability to expend an additional $1 million for the barrier during fiscal year 1994. We remain resolute in our support for this most important public project.

And again, Mr. Chairman, thank your committee for your decades of assistance in attempting to satisfy the water needs of the city of Houston.

Thank you very much.

[The statement follows:]

STATEMENT OF FREDERICK A. PERRENOT

Mr. Chairman and members of the committee, I am Frederick A. Perrenot, and I serve as director of public utilities for the city of Houston, Texas.

I would like to express Houston's appreciation for this committee's long-term support for the Wallisville saltwater barrier and assure you that this project remains a high priority in our planning for the future. Beginning in the 1950's and 1960's, my predecessors planned for a system of wells and surface water supply reservoirs that would carry our metropolitan area into the 21st century. Today am requesting your support for one of the final links in that planning process, a link that will carry us to the year 2030.

In the city's recent water supply master planning efforts, we made a comprehensive effort to evaluate all practical alternatives regarding future water supply development. These alternatives included conservation which in and of itself can be considered a source of supply. Even with a major effort to conserve the available ground and surface water, supplies will meet our area's needs only until the year 2008 without the Wallisville saltwater barrier.

Supporting Wallisville for as many years as we did without the benefit of any real progress was difficult, and for this reason, the construction that has taken place during the last two years has been a very positive development.

The city can only hope that the progress will continue, and if possible, the U.S. Army Corps of Engineers could be encouraged to pick up the pace and finish construction at the earliest possible time.

Toward this end, the city of Houston supports the corps and their expressed capability to expend an additional $1 million for Wallisville saltwater barrier construction during FY 1994.

We remain resolute in our support for this most important public project and again thank this committee for your decades of assistance in trying to satisfy the water supply needs of the city of Houston.

CLOSING REMARKS

Mr. GEREN. In summary, Mr. Chairman, on behalf of our delegation, please accept our appreciation for the excellent job you and your committee have done in these difficult times. It is difficult to sustain sound water resource and development programs. These have proved their environmental and economic worth and we think they are justified for the future.

Thank you for allowing us to appear before this committee. As we stated last year, we stand ready to bear our fair share of the burden. We ask only that the return on investments to the Nation's economy and the soundness of Federal participation in the Trinity River basin water resources development be taken into consideration in arriving at your decisions.

As always, it has been a pleasure for our group to appear before you. Thank you.

Senator JOHNSTON. Thank you, Mr. Geren. It is always nice to have you. You and your group do a wonderful job and underscore the importance of these projects.

Thank you, again.

PREPARED STATEMENT

Senator JOHNSTON. The subcommittee has received a prepared statement from the Port of Houston, which, without objection, I'll make part of the hearing record.

[The statement follows:]

STATEMENT OF THE PORT OF HOUSTON AUTHORITY

Chairman Johnston and members of the subcommittee, on behalf of the Port of Houston Authority (PHA), thank you for permitting us to submit written testimony in support of several important navigation projects in the U.S. Army Corps of Engineers Civil Works Budget for Fiscal Year 1994.

The specific projects we support are as follows:

Houston Ship Channel Operation and Maintenance	$ 11,034,000
Houston-Galveston Navigation Channels Preconstruction Engineering and Design	$ 692,000
GIWW - Sargent Beach	$ 3,875,000
GIWW Land Acquisition	$ 6,000,000*

Before we review one particular project to be funded in FY 94, we would like to mention a few points of distinction about the Houston Ship Channel.

It is no exaggeration to say that the Houston Ship Channel is one of the most important economic lifelines between our nation and the world. Houston's favorable geographic location provides easy access to the entire world business community through key ocean, land and air routes. Nearly 100 shipping lines connect Houston with more than 250 world ports. Four major railroads provide cargo distribution throughout the United States and more than 160 trucking lines service the rest of the nation via the Texas and interstate highway system.

We are proud to report that last year a total of 5,280 ships flying the flags of 77 different nations called on the Port of Houston. In addition, approximately 35,000 barges navigated the waterway. The combined cargo of these vessels exceeded 125 million tons.

All of this has made the Port of Houston the number one U.S. port in foreign tonnage and the third busiest port in foreign tonnage. It is the eighth busiest port in the world and generates nearly $3 billion a year in revenues. An estimated 29,000 people work in jobs that are directly related to Port of Houston activity and another 110,000 jobs are indirectly related to the port's activity. There is no doubt that the port has become a vital force in the commerce of the United States and the world.

HOUSTON-GALVESTON NAVIGATION CHANNELS -- PRECONSTRUCTION ENGINEERING AND DESIGN FUNDS -- $692,000

A. Need for Houston Ship Channel Improvement -- While Houston is one of our nation's busiest ports, we are also one of the narrowest deep draft channels. The channel was last improved in 1966 when it was deepened to forty feet and widened to four hundred feet.

As you can imagine, ships and shipping patterns have dramatically changed to meet the demands of world trade over the last thirty years. Likewise, for reasons of safety, environment, and economics we believe that the Houston Ship Channel is long overdue to be improved.

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* Not identified in FY 94 Budget - U.S. Army Corps of Engineers Civil Works Budget

The voters of Harris County agree and have committed significant local funding to support these improvements. In 1989, Harris County voters approved by a two-to-one vote a measure that will provide the local funding ($130,000,000) to deepen the channel to forty-five feet and widen it to 530 feet.

B. Innovative Environmental Initiative and Beneficial Use of Dredged Materials -- The Port of Houston Authority is helping to lead the way in a unique and precedent-setting approach to addressing the environmental interests in this project. The port's role includes active participation and direct financial support of this environmental initiative.

The port has been working with federal and state agencies since early 1990 as part of the Interagency Coordination Team (ICT) in a cooperative effort to address environmental concerns in the proposed Houston Ship Channel project. The ICT represents a broad and diverse range of environmental interests including: the Environmental Protection Agency; the U.S. Fish and Wildlife Service; the National Marine and Fisheries Service; the Texas Parks and Wildlife Department; the Texas Water Commission; the Texas General Land Office; the Galveston Bay National Estuary Program; the U.S. Corps of Engineers; the Port of Galveston; and, of course, the Port of Houston Authority.

We are pleased to report that after two years of work, the ICT has approved the beneficial use plan for disposal of dredged material from the HSC project. Ultimately, the beneficial use plan approved by the ICT will provide for the creation of almost 6,000 acres of marsh, together with bird islands, boater destination islands and shoreline erosion protection.

The approval of the beneficial use plan represents a significant step forward for this important project and a commendation of the diligent work performed by this multi-agency task force.

The development of the beneficial use plan has been guided from the outset by three basic principles:

- Dredged material is a potentially valuable resource and should be considered and treated as such;
- Development of an environmentally acceptable disposal plan is intrinsic to the eventual approval of this project; and,
- Any disposal plan adopted must have long-term environmental benefits for the Galveston Bay system.

These principals are reflected in the disposal plan adopted by the ICT. In addition, the approach utilized in developing the plan is particularly noteworthy on four accounts:

- Suggestions for beneficial uses were actively solicited from the community and particularly from Galveston Bay user groups. These collective ideas were given full consideration in developing the plan. In point of fact, the community identified more beneficial uses than the material available.

- Sound scientific methods have been used to examine alternative beneficial use plans, including:
  - hydrodynamic and salinity models;
  - analysis of physical data;
  - sediment contaminant studies; and,

  - National Marine and Fisheries Service productivity studies to determine the most environmentally appropriate locations for marshes.

* Additionally, the Port Authority, itself, has funded several studies, including:

  - Probes of the bay bottom to assess the best bottom conditions for siting beneficial uses (relative to other environmental constraints);
  - Construction of a 250 acre demonstration marsh to determine how to achieve the desired result;
  - Funding of National Marine and Fisheries Service to assist in the development of design criteria and parameters for constructing ecological functioning marshes; and,
  - Construction of a five acre oyster reef under an EPA grant in order to determine large scale feasibility. (This is also a Coastal America project and a Galveston Bay National Estuary Program Action Plan Demonstration Project.)

* Finally, the plan addresses one of the priority concerns identified by the Galveston Bay National Estuary Program -- loss of wetland habitat. Approximately 4,900 acres of wetlands would be created.

* Finally, the plan addresses one of the priority concerns identified by the Galveston Bay National Estuary Program -- loss of wetland habitat. Approximately 4,900 acres of wetlands would be created.

It is most noteworthy that the ICT has determined that its disposal plan, if properly implemented and managed, can actually achieve a net positive environmental effect for Galveston Bay. Likewise, we believe it is also noteworthy that the Port of Houston Authority has committed to directly pay for up to $37 million in additional costs for these environmental benefits.

C. Need for Continued Corps Funding for Preconstruction and Design Studies -- Naturally, it is vital that the work underway be fully supported by scientific studies and modeling. The very success of the project is dependent upon quality scientific and engineering results. Accordingly, it is vital that sufficient funding be provided to support these efforts by the Corps.

The Port had every hope of seeing the studies completed in time to request authorization in the 1994 Water Resources Development Act. However, the Port also maintains that the quality and integrity of the scientific, engineering and modeling work take precedence. If, as the Corps has recently advised us, more time is necessary to ensure the quality of these studies, then we are committed to continue our work with the Corps, the ICT and the community to see this important project through to culmination in a timely manner.

D. Port Proceeding with Dredge Demonstration Project at Bayport Channel -- As the Corps proceeds with the necessary studies for the Houston Ship Channel improvement, the Port has taken the initiative to engage in a demonstration project using dredged material from the Bayport Channel to create a marsh.

The plans call for approximately 1.5 million cubic yards of shoaled material to be dredged from the Bayport channel's entrance flare for a 200-acre marsh site. The work will cost approximately $4.5 million.

Results of the demonstration project will provide valuable information once a plan to widen and deepen the Houston Ship Channel receives federal authorization.

The Bayport project will be financed using operating funds advanced from Bayport Terminal operators and public bond funds allocated for improvements to the channel.

We are proud of these environmentally conscientious efforts and believe the results will benefit the Galveston Bay and the community, as well as the Port Authority and channel users.

CONCLUSION

We urge the subcommittee to include funds in the FY 94 Corps appropriations to fully support the projects delineated above. This maintenance and particularly the preconstruction and design for the improvements to the ship channel represent important components in the Port of Houston's continued ability to move the commerce of the nation in a safe, efficient, and economical manner. We thank you for your consideration of these requests.

Arkansas River Basin Water Resource Projects

STATEMENT OF WALLACE A. GIERINGER, CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Senator JOHNSTON. Next we will have the Arkansas Basin Interstate Committee, with Wallace Gieringer, who is chairman of the Arkansas River Basin.

Mr. GIERINGER. Senator, it is always good to see you. Thank you for having us.

I serve as executive director for the Pine Bluff-Jefferson County Port Authority in Arkansas. It is my honor this year to serve as chairman for the Interstate Committee, which consists of five delegates from each of the States of Arkansas, Kansas, Oklahoma, Missouri, and Colorado, appointed by their Governors to represent those respective states.

I will serve as spokesman for the committee and respectfully request that copies of each State's individual statement be made part of the record along with this testimony.

Senator JOHNSTON. They will indeed.

Mr. GIERINGER. Thank you. On behalf of the committee, I have been asked to focus, Senator, on one subject and one project. And both are vital to the five-State area and the areas beyond.

McClellan-Kerr, Arkansas River Navigation System

The subject is McClellan-Kerr Arkansas River navigation system, which has brought economical waterway transportation to our States and regions—$1.3 billion in Federal investments by the Corps of Engineers have triggered in excess of $3.5 billion in private and public investments along the waterway and created over 53,000 jobs. It has also made our area a port to the world with international commerce.

Sadly, the future of this wonderful, multipurpose McClellan-Kerr Arkansas River navigation system is threatened. We have testified before you in the past and the written testimony goes into greater length. But basically the situation is that the Mississippi River is degrading and the lower water level is continually going lower and lower than it was expected to go.

When the McClellan-Kerr navigation system was originally built, there were three dams that were proposed in the system that were eliminated. Two of those—the merit of discarding them was found justified. The third was one-half mile upstream from the confluence of the Arkansas with the Mississippi. It is at Montgomery Point.

The situation, Mr. Chairman, is that the first dam on the McClellan-Kerr is 10 miles upstream from the Mississippi. The concrete sill of that dam is at 97 feet above sea level. The Corps is currently projecting, on the basis of recent history, that the water levels will get down to 95 feet in the Mississippi. That is 2 feet below the concrete sill. Basically, we have a situation in which we will not be able to navigate. There will be no navigation. Barges and tows would be sitting on dry land.

The Corps has checked and double checked and the system—the Mississippi continues to go downward. And as this continues to get lower, we will not have water to navigate.

MONTGOMERY POINT LOCK AND DAM

The solution and the project which we wish to discuss is Montgomery Point Lock and Dam, which would restore the integrity of the entire navigation system. The lock was in the original authorized project, Arkansas River navigation system, as I mentioned earlier, and thanks to congressional assistance, the construction authority has remained open.

Without Montgomery Point, all the Federal and private investments and the thousands of jobs are jeopardized.

We are especially grateful for your efforts in recent years and your action in fiscal years 1991, 1992, and 1993 to recognize the urgency of constructing Montgomery Point.

In the 1991 budget, you appropriated $1 million for the purchase of land required for Montgomery Point and you directed that the land be purchased during fiscal year 1991.

Unfortunately, the land has not yet been purchased. Mr. Chairman, congressional action is needed. We urge the Congress to specifically, in law, direct the Corps of Engineers to initiate construction with land acquisition in fiscal year 1993 and to award construction projects as soon as possible thereafter.

In connection with this—and Senator Johnston, I know it is dear to your heart in Louisiana as it is to us in Arkansas—we wish to applaud the President for his leadership and also the efforts of Congress, in working to create new ways of cutting expenditures while increasing general revenues as a means of reducing the Federal deficit and our national debt.

BARGE FUEL TAX INCREASE

At the same time, we are alarmed. We are scared to death by the proposal that the Federal inland waterways fuel taxes be escalated dramatically from a current rate of 17 cents to $1.20 or more. An increase of such magnitude would effectively eliminate the use of the inland waterway system for transportation purposes. It would devastate those industries which have invested billions of dollars and created thousands of jobs in dependence on low-cost water transportation.

Farmers large and small would suffer. The barge industry handles, as you know, about 50 percent of all of the grain exported from the United States to world commodity markets. Increases in transportation costs usually come out of farmers' pockets.

The proposed increase ignores the fact that waterway projects, like our own McClellan-Kerr and your Red, were originally justified and constructed as multipurpose projects benefiting not only the barge industry, but recreational users, flood control interests, public water supply, and electric power industry.

Senator JOHNSTON. Let me interrupt you right there, Wally. I have spoken to the President about the barge tax, and others have as well. It absolutely was a mistake to put it in that package. I think they must have had somebody at OMB that just did not know anything about the practical world, and just trotted this out without anybody looking at it in a careful way.

I think the President recognizes he has made a mistake on that. Now, not only can we not stand $1.19, I do not think we can stand any increase, because we fought a long and hard war over the present structure with the 19 cents.

And I do not see how there can be any increase. It would go right directly against the farmer, and most of these commodities are in international commerce. Price is set internationally.

So it would hurt farmers. It would hurt barge operators. It would hurt these projects. It does not make any sense.

Now, notwithstanding that, I would urge you and everybody within the sound of my voice to speak to your Representatives and Senators to make sure they get the message. Because whereas you and I know this is true, I would hate to have this kind of thing put in the law, even at a reduced amount.

I am virtually certain it is not going at $1.19, but I do not want some person at OMB to say, "All right, we hear you. Now we will cut it in half," because that is like getting shot with 5 bullets instead of 10. I mean, it still kills you.

Mr. GIERINGER. You are dead.

Senator JOHNSTON. That is right. So, keep agitating on that.

Mr. GIERINGER. Thank you; we will. You know, there have been surveys that show what increased transportation costs of the magnitude proposed would cause. And, basically, it would cause the diversion of cargo to truck and to rail.

Washington University in St. Louis did a study that showed what a 70-cent increase would do, and that would result, they projected, in a 70-percent diversion from water to other inland modes. And this would result in great reduction or elimination of the inland waterway system and navigation as we know it. There would be little or no tax revenue. And in the final analysis, it would be a loss rather than the gain that might be anticipated.

Massive diversion of cargo from the inland system would also in major shortfalls in the capacity of land transportation infrastructure to move bulk products to market.

We firmly believe that the proposed increases, as you do, Senator, are not justified. It would be detrimental to the economy of the Nation, resulting in lost jobs, lost public and private investments, drastic reductions in foreign trade, the balance of trade, and higher prices for everybody in this country.

We are grateful that in recent days the Senate in its wisdom voted 88 to 12 endorsing Senator Harkins' sense of the Senate resolution. We are very proud that our own Senator Bumpers was one of the sponsors of that, and we know you are active. This resolution urged that revenue figures set forth in the budget resolution not assume an increase inland barge fuel taxes beyond those increases already scheduled in current law. We urge your important committee to do all that is humanly possible to see that the proposed additional waterway fuel taxes are removed from the economic plan.

And also, at the same time, to see that the fiscal year 1994 appropriations budget include funds necessary for the operation and maintenance of our precious inland waterway navigation system.

That, Senator, concludes our remarks. We appreciate and thank you for your consideration, your assistance. We appreciate the foresight and wisdom that you and your colleagues have shown in providing solutions to water resources problems each and every year, and this year above all. The problems seem great, but together, we are confident, they can be overcome.

Thank you.

Senator JOHNSTON. Thank you very much, Wally. Always a pleasure to have you.

[The statements follow:]

STATEMENT OF WALLACE GIERINGER, CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and Members of the distinguished Committee. My name is Wallace Gieringer. I serve as Executive Director for the Pine Bluff-Jefferson County (Arkansas) Port Authority. It is my honor this year to serve as Chairman of the five-state Arkansas River Basin Interstate Committee, which consists of five delegates from each of the states of Arkansas, Colorado, Kansas, Missouri and Oklahoma as they were appointed by their Governors to represent those respective states. As Chairman, I will be the spokesman for the Committee and respectfully request that the copies of each state's individual statement be made a part of the record, along with this testimony.

We collectively have the responsibility to coordinate water resource matters among the states and to speak for the Arkansas River Basin in appearances before committees of Congress and regulatory agencies. We are joined here today by members of the Interstate Committee. We testify as a group signifying the strong bond of support which water officials from the five states have developed.

Mr. Chairman, on behalf of the Interstate Committee, I've been asked to focus on one subject and one project—both vital to the five-state area and beyond. The subject is the McClellan-Kerr Arkansas River Navigation System which has brought economical waterway transportation and world trade to Arkansas, Oklahoma, and neighboring states. This $1.3 billion federal project built by the Corps of Engineers has already helped attract private and public investments exceeding another $3.5 billion, and more than 53,000 new jobs have been created as a result.

Sadly, the future of this wonderful, multi-purpose McClellan-Kerr Arkansas River Navigation System is threatened. Continuing low water levels and increased sediment build-up at the confluence of the Mississippi River continue to erode the confidence of shippers about the reliability of the Arkansas River Navigation System. According to the Corps of Engineers, since 1980 there have been navigation restrictions on the White River Entrance Channel an average of 43 days per year.

Shutdown periods on the system are increasing. Existing disposal areas are substantially full. Acquisition of additional areas would cause the loss of scarce bottomland habitat. To keep the project open without Montgomery Point through use of dredging would not only be expensive, wasteful and environmentally damaging—it will be physically impossible.

The concrete sill of Nonrrell Lock and Dam—the first dam upstream—from the Mississippi (10 miles)—is at 97′ MSL. And the trend of the scouring of the bottom and low-water level of the Mississippi, where it affects the White River, continues downward.

As the low water level continues to get lower in the Mississippi at the White, an impossible situation will occur on the Arkansas. We won't have water to navigate. Dredging deeper is not the answer.

The solution and the project we wish to focus on is the Montgomery Point Lock and Dam which will restore the integrity of the entire navigation system.

The lock and dam was in the original project and, thanks to Congressional insistence, the construction authority has remained open. Without Montgomery Point, federal and private investments and thousands of jobs are jeopardized.

We are especially grateful for your action in the fiscal year 1991, 1992 and 1993 budgets recognizing the urgency of constructing the Montgomery Point Lock and Dam. In the fiscal year 1991 budget, Congress appropriated $1 million for purchase of the land required for the project and directed that the land be purchased during fiscal year 1991. Unfortunately, the land has not been purchased and the Corps' schedules still do not prescribe any land purchases.

Mr. Chairman and Members of the Committee, Congressional action is needed! We urge the Congress to specifically in law "direct the Corps to initiate construction with land acquisition in fiscal year 1993 and to award construction contracts as soon as possible thereafter."

We thank you for your consideration and assistance and are deeply appreciative of the foresight and wisdom you and your colleagues have shown in providing solutions to water resource problems each and every year.

STATEMENT OF WALLACE GIERINGER, ARKANSAS CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and members of the Committee, my name is Wallace Gieringer. I serve as Executive Director of the Pine Bluff-Jefferson County Port Authority and Arkansas Chairman of the Interstate Committee. Other committee members representing Arkansas are Messrs. Wayne Bennett, internationally known soybean and rice farmer from Lonoke; Michael C. Carter, attorney from Fort Smith; Colonel Charles D. Maynard, U.S. Army, retired, from Little Rock; and Barry McKuin, executive vice president for Winrock Farms at Morrilton.

We're here today, Mr. Chairman, to thank you and the members of this most important committee for your past assistance, to urge appropriation of funds necessary to construct the urgently needed Montgomery Point Lock and Dam, and to support the Administration's budget requests for continued construction of needed features to the McClellan-Kerr Arkansas River Navigation System.

Continuing low water levels and increased sediment buildup at the confluence of the Mississippi River continue to erode the confidence of shippers about the reliability of the Arkansas River Navigation System. According to the Corps of Engineers, since 1980 there have been navigation restrictions on the White River Entrance Channel an average of 42 days per year. Further delay in constructing the lock and dam will continue to discourage shippers from using the system and could jeopardize the $1.3 billion federal infrastructure investment, $3.5 billion public and private investment, and 53,000 jobs created since the system has been in place.

We are especially grateful for your action in the fiscal years 1991, 1992 and 1993 budgets recognizing the urgency of constructing the Montgomery Point Lock and Dam. In the fiscal year 1991 budget, Congress appropriated $1 million for purchase of the land required for the project and directed that the land be purchased during fiscal year 1991. Unfortunately, the land has not been purchased and the Corps' schedules still do not prescribe any land purchases.

In view of the rapidly deteriorating conditions on the lower end of the navigation system, the shutdown periods on the system are increasing. Existing disposal areas are substantially full and acquisition of additional areas would cause the loss of scarce bottomland habitat. To keep the project open without Montgomery Point through use of dredging would not only be expensive, wasteful and environmentally damaging—it will be physically impossible. In 1988, and again in 1991, the Corps has found it necessary to dredge to the following elevations to maintain authorized project depth—a 9′ channel—on the White River Portion of the Arkansas River Navigation System:

ARKANSAS RIVER NAVIGATION SYSTEM—BOTTOM ELEVATION OF CHANNEL

[In feet]

Year	At Norrell Lock	At mouth
1991	97	96
1990	98	96
1989	98	96
1988	97	94

The concrete sill of Norrell Lock and Dam—the first dam upstream from the Mississippi (10 miles)—is at 97′ MSL. And the trend of the scouring of the bottom and low-water level of the Mississippi, where it affects the White River, continues downward.

As the low water level continues to get lower in the Mississippi at the White, an impossible situation will occur on the Arkansas. We won't have water to navigate. Dredging deeper is not the answer. Congressional action is needed.

We urge the Congress to specifically in law "direct the Corps to initiate construction with land acquisition in fiscal year 1993 and award of construction contracts as soon as possible thereafter."

The urgency of the project is such that planning, design and construction need to be carried out concurrently rather than sequentially, as now planned. To do otherwise would cause a delay in providing the needed structure and jeopardize the integrity of the McClellan-Kerr Navigation System.

Other projects in our region are vital to the environmental, social and economic well-being of the region and our nation. We strongly recommend that you favorably consider the following in your deliberations.

—Support for all funding included in the President's budget for the construction, operation and maintenance of the McClellan-Kerr Arkansas River Navigation System.

—Continuation of construction authority for the McClellan-Kerr Arkansas River Navigation Project until remaining problems identified by the Little Rock District Corps of Engineers have been satisfactorily resolved.

—Continue the acquisition of additional real estate interests along the navigation system in Arkansas to allow the system to operate as originally designed.

—Funding to continue the cost-shared May Branch Flood Reduction Feasibility Study at Fort Smith, Arkansas.

—Funds to continue the repair and rehabilitation of the power units at the Dardanelle Lock and Dam which first went into operation in 1965. After this work is completed, power output will be increased by 13 percent.

—We urge the Congress to encourage the Military Traffic Management Command to redouble their efforts to identify opportunities to accelerate their use of the nation's navigable waterways to move military cargoes and thereby help contain the nation's defense costs.

—We urge the Congress to provide $1 million in fiscal year 1994 to start the construction of the Morgan Point Bendway Project on the lower McClellan-Kerr System in Arkansas. This environmental restoration project will create a wetlands and restore an old river lake in an abandoned bendway in the Arkansas River. Desha County and the Arkansas State Game and Fish Commission support the project.

Last year we asked for your continued support of the Arkansas River Wetlands Study. We thank you for your support and are very pleased to report that the implementation of the study is proceeding in conjunction with the Arkansas Game and Fish Commission under the authority Section 1135 of PL 99–662.

In conclusion, Mr. Chairman, the entire Arkansas River Navigation System remains at risk and its long-term viability is threatened. The system will remain at risk until Montgomery Point is constructed, which will take 3 to 4 years. Some $5 billion in Federal and private investments and thousands of jobs are endangered. The proposed lock and dam was in the original project. Thanks to Congressional insistence, the construction authority remains open.

We fully endorse the statement presented to you today by the Chairman of the Arkansas River Basin Interstate Committee. We appreciate the opportunity to testify before your most important subcommittee and urge you to favorably consider our request for needed infrastructure investments in the natural and transportation resources of our nation.

STATEMENT OF CHARLES L. THOMSON, COLORADO CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman, and members of this distinguished Committee, my name is Charles L. Thomson, and I am General Manager of the Southeastern Colorado Water Conservancy District, with offices in Pueblo, Colorado. I submit this statement today on behalf of the other members of the Colorado delegation, who were appointed by our Governor, the Honorable Roy Romer, to serve as members of the five-state Arkansas River Basin Interstate Committee. My colleagues are Mr. John E. Javernick, farmer and rancher from Canon City, representing the Upper Arkansas Basin. Mr. Lee Hancock, retired superintendent of the High Line Canal Company near Rocky Ford, representing the Lower Arkansas Basin. Mr. Raymond D. Nixon, retired Executive Director, Department of Public Utilities for the City of Colorado Springs, represents the municipal and domestic water users in the Basin. The fifth member of the Committee was just appointed. Mr. Daries C. Lile, newly appointed Director, Colorado Water Conservation Board, will be a valuable addition to our Committee, having served in the Colorado River Basin for many years.

We are truly honored today, Mr. Chairman, and members of the Committee, to join our colleagues from the other great states of Arkansas, Missouri, Oklahoma and Kansas who comprise the five state Interstate Committee. We appear before you today in a truly unified group, respectfully requesting appropriations for necessary water resource projects in our five states.

The members of the Colorado delegation have carefully reviewed the construction, operation and maintenance, and other financial requests submitted by the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation for projects in our states. We wholeheartedly endorse each of them as essential elements in the continued programs which are so essential in the management, conservation, and long range planning of our critical water supply.

U.S. Bureau of Reclamation—Fryingpan-Arkansas project

Construction	$400,000
O&M	3,920,000
Reservoir/recreation management	52,000

The $400,000 is necessary to complete the uprating of the static starter equipment at the Mt. Elbert Pumped Storage Power Plant, the only such facility in the Fryingpan-Arkansas Project. This unique Plant is a pump-back, peaking power hydro electric facility, which utilizes the latest technology in power production. Fryingpan-Arkansas Project Water, and other individually owned water supplies, are stored in a forebay until power demands come on line. A limited supply of water is then released through the penstocks which generate instantaneous electrical energy for use during peaking periods. The power can be distributed throughout the Western Area Power Administration territory to serve a wide variety of needs. The precious water is then stored in Twin Lakes Reservoir until the peaking demand is off. The turbines are then used as pumps, utilizing dump electricity from other sources to pump water back to the forebay for subsequent uses. This is one of the cleanest, most inexpensive ways to produce electrical energy without any degradation to the environment. The waters are then released from Twin Lakes Reservoir down the famous Arkansas River for uses by municipalities, irrigation companies, and recreation users.

A total of $3,920,000 for operation and maintenance includes the following: $250,000 to replace Mt. Elbert exciter transformers; $100,000 spare parts for Mt. Elbert circuit breakers; $820,000 multi purpose facilities; and $2,750,000 O&M on primary features of the Project.

Also included are Operation and Maintenance funding requirements for cultural resource activities, recreation management, project headquarters expenses, and water source activities and recreation management activities. These are extremely important to not only maintain the physical plants which were constructed in the 1960's and 70's, but also to enable the Bureau of Reclamation and cooperating agencies to maximize the use of those facilities. We commend the policies of the U.S. Bureau of Reclamation in evaluating each project to determine how the facilities can be better and efficiently used.

Reservoir/Recreation Management, $52,000. These funds are to be used for a number of reservoirs in the eastern Colorado system of the Bureau of Reclamation, and also include funding for "Cultural Resource Activities". As stated in our testimony on the Operation and Maintenance funding for the Bureau, we enthusiastically endorse these funds because we do feel this is an important way in which Bureau facilities can be more fully and appropriately utilized. The Bureau has a "Challenge Grant Program" wherein they enter into partnerships with non federal entities on a 50–50 cost share basis to enhance recreation and Fish and Wildlife resources stewardship. A good case in point, is the proposed outdoor theater at Pueblo Reservoir in which the Colorado Outdoor Performing Arts Association, the University of Southern Colorado, Pueblo Community College, Colorado Division of Parks and Outdoor Recreation, and private citizens will work together to develop a facility which will utilize land which was acquired by the U.S. Bureau of Reclamation for public use at Pueblo Dam and Reservoir to enhance the other recreational opportunities at this important facility. The Project will utilize cost sharing opportunities with departments of education, and provide employment for a wide range of skilled and unskilled people. The theme of the plays to be presented to the general public will incorporate historical, educational, and similar programs to educate people regarding water and natural resource matters.

General Investigation: Upper Arkansas River Basin, $125,000. The fiscal year 1994 program focuses on studies to meet current and future water quantities-quality and environmental needs through improved management of existing reclamation and/or non federal facilities. The Upper Arkansas River Basin Water Quality investigation study is to identify the source and type of heavy metals, dissolved solids, and suspended sediments currently degrading the quality of water in the Upper Arkansas River Basin. The Program was initiated in 1992, and the funds recommended will complete that study. This is an extremely important stretch of river because as testified earlier, we use it to transport Fryingpan-Arkansas Project Water from the source to the ultimate consumers. The water is used for fishing, recreation, esthetics, and other public purposes. The river flows through an area which was first developed for mining and milling to meet the needs in the late 1800's and early 1900's. It is absolutely essential that qualified experts, such as U.S. Bureau of Reclamation personnel determine the sources of those impurities, and develop plans to correct them.

U.S. ARMY CORPS OF ENGINEERS

At the time I prepared this testimony I had not received specific information from the Albuquerque District Office, U.S. Army Corps of Engineers, relative to amounts budgeted for the following projects: John Martin Dam and Reservoir and Trinidad Dam and Reservoir.

It is my understanding no new construction is contemplated at either of these facilities, but it is absolutely essential that adequate funds be provided to operate and maintain these units. Both are multi purpose projects, and provide essential flood control in southeastern Colorado and western Kansas. They store critically needed agricultural and M & I water, and provide recreation opportunities for citizens in Colorado, New Mexico, North Texas, Western Oklahoma, and Western Kansas.

Montgomery Point Lock and Dam, State of Arkansas. As mentioned in my opening paragraph, Colorado is a part of the five state Arkansas River Basin Interstate Committee. I participated in the Annual Meeting of that Committee in Pine Bluff, Arkansas, Thursday, March 11, 1993. During the course of carefully reviewing water related programs, the members unanimously agreed to endorse Montgomery Point Lock and Dam, near the confluence of the Arkansas and Mississippi Rivers as our top priority. Mr. Chairman, your fiscal year 1991, 1992 and 1993 budgets recognized the urgency for constructing this Lock and Dam. In fiscal year 1991 you appropriated $1 million for the purchase of land required for the project, and directed that the land be purchased. It is my understanding the U.S. Army Corps of Engineers is in the process of completing that responsibility. We now request the appropriation of necessary funds to begin actual construction. This project was authorized as an early feature in the Arkansas River Navigation System, which has now become the McClellan-Kerr Arkansas River Navigation System. The Lock and Dam was postponed because it was felt the flows of the Mississippi River would remain constant, and such a facility would not be needed. Records are conclusive that the flow of the Mississippi has continued to decline for a variety of reasons, and this Lock and Dam is absolutely essential to protect the investment of nearly $5 billion by the United States Government, the states of Arkansas and Oklahoma, and private industry. At a time when the President of the United States, and members of Congress are developing plans to create new jobs, it would be counter productive to delay this project and reduce and eliminate existing employment.

Mr. Chairman, and members of this very distinguished Committee, I have had the pleasure to appear before this Committee each year since 1966. I am certainly pleased to call your attention to the fact the amounts of money requested in my testimony are the lowest ever requested. This is a result of the fact the Fryingpan-Arkansas Project was officially declared complete in September 1990. Our water District now returns to the United States Treasury amounts of money each year far in excess of those requested for minimum construction and necessary O&M. We want to sincerely compliment you, and thank you and your predecessors for the foresight, wisdom, and courage which each of you have demonstrated down through the years by providing funds for essential water resource management programs throughout the United States. Those of us who have the responsibility for water management on a daily basis, dread to think what problems would face our nation today, both in water quality and quantity, were it not for that foresight. I have considered it an honor each year, Mr. Chairman, and Members of the Committee to be permitted to appear before you. I wish I could adequately express the sincere appreciation which all of the people served by our District feel for the leadership you have provided.

U.S BUREAU OF RECLAMATION-ARKANSAS BASIN-COLORADO

The Congress of the United States passed H.R. 429 and President George Bush signed the legislation as one of his last official acts as President of the United States. H.R. 429 contains Section 1910. Lake Cheraw water reclamation and reuse study on page 417, which directs and authorizes the United States Bureau of Reclamation "to conduct a study to assess and develop means of reclaiming the waters of Lake Cheraw, Colorado, or otherwise ameliorating, controlling, mitigating potential negative impacts of pollution in the waters of Lake Cheraw in groundwater resources or the waters of the Arkansas River". At the time I prepared my testimony for presentation on March 30, 1993, I had not received information from the Bureau of Reclamation regarding the Lake Cheraw Study. They had not had time to evaluate the legislation and prepare cost estimates. Informal meetings and studies now indicate an appropriation of $100,000.00 will enable the Bureau to meet with appropriate state and local officials to develop a plan and to commence necessary field and laboratory research. The Lake Cheraw study was authorized by the Congress of the United States to develop information and methodology on brackish water which could then be used to enhance water quality in bodies of water throughout the United States.

STATEMENT OF ARTHUR T. WOODMAN, KANSAS CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

Mr. Chairman and members of this distinguished Committee, I am Arthur T. Woodman, Architect, with offices in Wichita, Kansas, and Chairman of the Kansas Interstate Committee for the Arkansas River Basin. This statement is submitted today, representing the Kansas Delegation, and my colleagues are James O. Foster, (Retired) Manager of Special Projects, Boeing Commercial Airplane Co., Wichita Division; Frank Liebert, Attorney-At-Law, Coffeyville; Richard Niermen, Hospital Administrator, Halstead; and Taylor Peckham, Insurance Executive, Augusta.

We are honored to join with our colleagues from the great five states of Arkansas, Colorado, Kansas, Missouri and Oklahoma, which five (5) states comprise the Arkansas River Basin Interstate Committee. We appear before you in unison today and fully endorse the statement of the Chairman of the Arkansas River Basin Interstate Committee.

The water resource projects in the Kansas portion of the Arkansas River Basin have been carefully reviewed by the Kansas delegation and reflect accurately the needs as presented in the Administration Budget, fiscal year 1994, many of which are safety and conservation oriented. We again call your attention to those of the Corps of Engineers for construction:

Great Bend Flood Control (Local Protection); Halstead Flood Control (Local Protection); and Kanapolis Lake Study/Recon Phase.

The Great Bend project construction continuation will stop flooding of a great city in west/central Kansas. The Halstead Project is vital to the preservation of a community recognized for the outstanding major regional hospital and medical services for farming communities.

The citizens of the relatively small municipality of Halstead have dedicated themselves for local share and they are most deserving of construction of their flood control project for optimum protection at the earliest possible time.

Similar appropriations are equally important to continue development of flood control protection by continuation of engineering and design: Arkansas City Flood Control (Local Protection); and Winfield Flood Control (Local Protection).

Of particular note and importance are the ongoing research and planning projects in the Administration Budget for your continued support which will provide data for intelligent decisions on major and vital water resource development in Kansas for the future, such as those of the Department of Interior, Bureau of Reclamation: Arkansas River Management Improvement Study, Phase II; Resource Management Plan For Cheney Reservoir; and Erosion Control For Cheney Reservoir With Planning For Developing Wetlands On Upper Reaches.

In addition, we state herewith our unanimous support for the construction of the critical Montgomery Point Lock and Dam Project to maintain viable commerce of navigation between the McClellan-Kerr Waterway and the Mississippi River.

Mr. Chairman and Members of this Committee, we wish to thank you for the dedicated manner in which you and your distinguished colleagues in the Congress of the United States have dealt with the Water Resources Programs in allowing us to present our views and recommendations to you. We look forward with great expectations and hope for the future of water resource development in Kansas and the Arkansas River Basin.

STATEMENT OF HAROLD B. SCOGGINS, OKLAHOMA CHAIRMAN, ARKANSAS RIVER BASIN INTERSTATE COMMITTEE

SUMMARY OF STATEMENT FOR THE STATE OF OKLAHOMA

Of special interest to our committee is funding of $20 million for Mingo Creek, Tulsa, Oklahoma and $800,000 for Fry Creeks, Bixby, Oklahoma. Also needed is $1.7 million to repair drainage pipes in the Tulsa and West Tulsa Levees.

We request that $7 million be appropriated to the Montgomery Point Lock and Dam project at mile point 0.6 in the White River entrance channel to the McClellan-Kerr Arkansas River Navigation system.

We strongly oppose any increase in the Fuel Tax for inland navigation. The committee requests that $500,000 be provided in fiscal year 1994 to conduct a reconnaissance study of the Cimarron River Basin. The committee requests that funds be provided sufficient to conduct a reconnaissance study of the Bird Creek Flood Control Project. $150,000 is needed to initiate reconnaissance studies of the Optima lake project.

Mr. Chairman and members of the committee, I am Harold B. Scoggins, Oklahoma Chairman of the Arkansas River Basin Interstate Committee, from Muskogee, Oklahoma.

It is my privilege to present this statement on behalf of the Oklahoma Members of our Committee in support of adequate funding for water resource development projects in our area of the Arkansas River Basin. Other members of the Committee appointed by the Governor are: Mr. James M. Hewgley, Mr. Coleman Fite, Mr. E. R. Albert, Jr. and Mr. Robert S. Kerr, Jr.

Together with representatives of the other Arkansas River Basin states, we fully endorse the statement presented to you by the Chairman of the Arkansas River Basin Interstate Committee. We appreciated the opportunity to present our views of the special needs of our State concerning several studies and projects.

We are particularly pleased that the President's budget includes funds to advance work for flood control in Oklahoma. Of special interest to our committee is funding of $20,000,000 for Mingo Creek, Tulsa Oklahoma and $800,000 for Fry Creeks, Bixby, Oklahoma. In addition, the Tulsa District has initiated work to repair drainage pipes in the Tulsa and West Tulsa Levees. Funds provided in fiscal year 1991 were used to identify pipes and culverts through the levees which have deteriorated over the almost 50-year project life. Current efforts using fiscal year 1991 funds will repair 23 of the 50 damaged pipes. An additional $1.7 million is needed to repair the remaining 27 pipes.

Of particular interest, given today's economy and the budget constraints under which the Defense Department is being required to operate, is the military's use of the inland waterways. It is in this light that we ask Congress to provide the funds necessary to the National Guard Bureau specifically to build permanent dock facilities at Boudinot Safety Harbor on the McClellan-Kerr Arkansas River Navigation System to serve Camp Gruber, Oklahoma and a similar facility at W. D. Trimble Lock and Dam near Fort Smith, Arkansas, to serve Fort Chaffee. The Oklahoma and Arkansas Army National Guard have a need for dock facilities to maximize the savings potential and defense preparedness that can accrue from water transportation.

Serious problems have arisen at the waterway entrance to the navigation system. Extensive testing has proved that construction of Montgomery Point Lock and Dam will be necessary to correct the problem. This project must be started soon to regain/maintain the shippers confidence in the reliability of the system.

The Congress in its infinite wisdom has, for the past three years, appropriated monies for this project. We ask that you continue to express your good judgment this year and appropriate $7 million for fiscal year 1994. The money will be used as follows: $3.4 million—A/E Design Work, District Engineer's capability for Calendar Year 1993. $2.6 million—Final A/E Design, Calendar Year 1994. $1.0 million—purchase of Land.

We are also strongly opposed to any increase in the Fuel Tax Surcharge above the limit already established by law, or any new Users Fees attached to inland water transportation.

Studies conducted by the Tulsa District in the 1970s identified the potential for flood damage reduction measures in the Cimarron River Basin. Several potential multiple purpose reservoirs were considered for development in response to needs for flood control, water supply, fish and wildlife, and recreation. Development and operation of these projects in conjunction with the existing system of reservoirs in the Arkansas River Basin would provide for flood damage reduction along the Cimarron River downstream, as well as along the Arkansas River from Keystone Dam near Tulsa to Fort Smith, Arkansas. These projects would also offer the potential for development of hydropower and navigation benefits along the McClellan-Kerr Arkansas River Navigation System. Considerable local interest has developed in these projects, particularly the potential Crescent Lake which would be located about 15 miles north of Oklahoma City, and the Tulsa District has received letters of support for initiation of reconnaissance studies from the Oklahoma Water Resources Board and the mayors of Guthrie, Crescent, and Oklahoma City. The committee requests that $500,000 be provided in fiscal year 1994 to conduct a reconnaissance study of the Cimarron River Basin.

Three multipurpose flood control projects, Birch, Candy, and Skiatook Lakes were planned for the 1,137 square-mile Bird Creek Basin in northeastern Oklahoma; however, only Birch and Skiatook have been completed. These lakes, located on tributaries of Bird Creek, provide 50- and 75-year flood protection, respectively. However, because they control only 37 percent of the Bird Creek drainage area, significant flood hazards still exist in the lower reaches at Barnsdall, Avant, Tulsa, and Owasso. Consequently, studies are needed to determine the feasibility of additional flood control measures in the basin. The Tulsa District has received letters requesting assistance in solving the flood problems from Senator David Boren and officials of the cities of Tulsa, Sperry, Skiatook, and Owasso. The committee is pleased that funds to initiate reconnaissance studies are included in the president's budget and continues to support this important investigation.

Optima Lake, located on the North Canadian River about 4.5 miles northeast of Hardesty, Oklahoma, was constructed for flood control, water supply, recreation, and fish and wildlife. The dam was completed in 1978, but the lake has never filled. A recent review of hydrologic conditions shows that, because of dramatic changes in the runoff characteristics of the basin since the lake was planned, Optima Lake cannot provide a dependable water supply. Because the conservation pool has not filled, the flood control storage has not been utilized and under present circumstances, is not likely to be needed. In addition, because of the extremely low water level, the lake does not provide the recreational opportunities of fish and wildlife benefits for which it was planned.

A detailed study of the Optima Lake project, under authority of Section 216 of the Flood Control Act of 1970, is needed to determine the feasibility of project modifications to ensure the highest and best use of the project's resources and minimize the Federal investment in Optima Lake. The Oklahoma Water Resources Board has expressed interest in the study because of the need for municipal and industrial water supply in the region and has indicated a willingness to cost share feasibility studies if viable water supply alternatives are considered. The committee requests funding of $150,000 to initiate reconnaissance studies.

The North Canadian River at Oklahoma City, Oklahoma, study was started in October 1991 to determine the need for, and feasibility of small dams, and related riverfront improvements for flood control and other purposes along the North Canadian River. Early in the investigations, studies indicated that flood control measures were not economically feasible and studies for that purpose were concluded. However, during the study, the Corps received new guidance on restoring fish and wildlife habitat losses resulting from Federal construction activities. The reconnaissance study was reoriented to investigate losses that occurred from construction of the Oklahoma City Floodway and encroachment on the flood plain due to the increased flood protection. Studies showed that construction of the floodway has resulted in the direct loss of 366 acres of bottomland hardwoods and 411 acres of riverine wetlands. A reconnaissance report was completed in September 1992 which recommends that studies proceed into the feasibility phase for fish and wildlife restoration if a cost sharing partner is identified. The committee supports $125,000 included in the budget for the Corps to conduct feasibility studies.

We also support funding for the Small Flood Control Projects Program, (Section 205 of the 1948 Flood Control Act, as amended). Funds are needed under that program to provide local flood protection in many areas within our state.

We want to express our appreciation for your continued support of the Emergency Streambank Stabilization Program, (Section 14 of the 1946 Flood Control Act, as Amended). With that program, many local Oklahoma communities will be able to adequately provide protection for public facilities subjected to streambank erosion. We will be able to prevent streambank erosion and resulting damages to public facilities along the Washita River in Caddo County, Oklahoma, and Anadarko, Oklahoma; the North Canadian River at Spencer, Oklahoma, and Canadian and Okfuskee Counties, Oklahoma; the Arkansas River at Tulsa and Sand Springs, Oklahoma; the Poteau River in LeFlore County, Oklahoma; the Chickaskia River at Fort Oakland, Oklahoma; Minnehaha Creek in Canton, Oklahoma; and many other areas within our state.

Sargent Beach, TX

STATEMENT OF VERNON BEHRHORST, EXECUTIVE DIRECTOR, GULF INTERCOASTAL CANAL ASSOCIATION

Senator Johnston. Next, we have the Gulf Intercoastal Canal Association with Vernon Behrhorst, executive director. We used to call that Gulf Intercoastal Seaway Association, did we not?

Mr. Behrhorst. It is a related organization, Senator.

Senator Johnston. We are glad to have you here, Dale.

Mr. Behrhorst. I also have with me, the gentleman on my left, who needs no introduction: Dale Miller. I think this is Dale's 50th year appearing before this subcommittee or its predecessor. Been through 10 Presidents and 25 Congresses.

I also have with me here Gary LaGrange. You know Gary very well, who is our president-elect. And I also invited Mr. Less Sutton here, in case you got any real questions on water transportation. Less is one of the experts in the United States. And I believe Harry Plomarity follows me right behind.

We would like for you to consider a number of projects for us. I will not go into all of them. Neither will I go into something covered very briefly in my testimony about the inland waterway user tax. I concur with what Wally Gieringer had to say concerning the fuel tax. And, Senator, I have provided you a letter a few weeks back on this very subject and we are continuing to talk to other Members of the Congress and the administration to see that the thing does not go through. If it goes through, the final question is, Will there be any traffic left? Will there be any reason for operating and maintaining our waterways at all?

Our principal project which we wanted to bring to your attention is Sargent Beach. Congressman Brooks already commented on it and stated his favorable support for that.

But I do want to mention something very briefly on this that happened in this very committee last year, which is that one, it was authorized by the Congress; two, you did continue funding at $1 million to proceed with the planning, engineering, and design; and three, as a means of expediting the project, Senator Johnston, you included language in the report directing the Corps of Engineers to expedite the project by reprogramming funds. The Corps is doing this. Maybe we would like a little bit more, but they have been moving well on the project.

The important thing is that enough planning, engineering, and design will be finished in fiscal year 1993 so that the Corps has the capability to initiate actual construction in fiscal year 1994. We appreciate what the committee has done to help us do this. We are looking now at a 1997 completion date because of that.

We are asking for $6 million in fiscal 1994, which would complete the planning, engineering and design, and begin construction with the acquisition of all the rights of way and so forth.

We urge your serious consideration of this, of course, recognizing that it is a new start, but we believe one that is well worthy because of the implications of the project without the project.

CORPUS CHRISTI BAY—PORT ISABEL, TX

And two others I just want to quickly mention. We have two section 216 studies, one was begun last year, between Corpus Christi and Port Isabel near the Mexican border, which you added on $300,000 for us to get that one underway.

HIGH ISLAND—BRAZOS RIVER, TX

We are also asking for a new one which, of course, probably will be in the administration's request, incidentally, doing High Island-Brazos River.

I will mention this bit of concern. It is that we must be sure that two components of that study be done upfront: one, the environmental assessment; and two, a long-range dredge disposal plan which is a part of this study, which the State of Texas Department of Transportation needs in order to acquire the needed spoilage areas. And that is a concern. I would suggest you may want to reemphasize the necessity of these in your appropriations report.

MISSISSIPPI RIVER SHIP CHANNEL, INDUSTRIAL CANAL LOCK

The Port of New Orleans group who testified yesterday mentioned Industrial Canal Lock. The Assistant Secretary of the Army for Civil Works has approved the above Claiborne Avenue site for the replacement lock. And the Corps is to concentrate on that site. This is the first time we have had a consensus on that. And, hopefully, as we go down in the next few years, we will get the planning approved and we will be able to come to construction in the not too distant future.

Senator JOHNSTON. How are we doing with those people in the ninth ward? Have you kept up with the negotiations with those people in the ninth ward?

Mr. BEHRHORST. There is basically a consensus amongst everybody. Of course, a lot of the problems with the historical district and so forth have been resolved because it will be constructed within the existing system, the Industrial Canal. No relocation will be required of the present plan.

Also, because it is located entirely on port property, it is wide enough. They can build a bypass channel around the construction site so a minimal interruption of traffic in the process.

Senator JOHNSTON. But we will have to displace some homes.

Mr. BEHRHORST. No; there is no displacement at all under this plan.

Senator JOHNSTON. No displacement?

Mr. BEHRHORST. No; that is the good part about it. There will be some impact because of bridges and things of that nature, but those can be worked out. Of course, some of the bridges are already being taken care of.

This is the first time in my 30 years I have been involved in this thing where we see light pretty close to the end of the tunnel.

Thank you, Senator, and the rest of the committee, for all you have done. The rest of ours includes our written statement.

Senator JOHNSTON. Thank you very much, Vernon.

Glad to have you here, Gary.

Dale, come back. We appreciate seniority around here. [Laughter.]

Mr. MILLER. I am going to hang around for this next witness here.

[The statement follows:]

STATEMENT OF VERNON BEHRHORST

Thanks you for the opportunity to again present its request for funding of water resources projects on the Gulf Intracoastal Waterway (GIWW) and connecting waterways. Accompanying me is Dale Miller, GICA's Board Chairman, who is known by you, having appeared before this Subcommittee for the first time fifty years ago and each year since. During this time, the membership of Congress has changed and Administrations have come and gone. Dale and GICA have worked constructively with the 25 Congresses and 10 Presidents during this half-century in maintaining and improving our nation's waterway network. We pledge to do likewise with this 103rd Congress and our new President.

Also accompanying me is GICA's new President, King Fisher of Texas; GICA President Elect, Gary LaGrange of Louisiana; and GICA Secretary, Homer Hirt, Jr., of Florida.

With a new Administration, we have a delay in submission of a budget to Congress. this makes requests for precise amounts for projects and programs impossible. This is not an insurmountable problem, and we will work with you to fill the information gaps when the budget is submitted in a few days. Where dollar amounts are included, they are based upon the information available to us.

We also recognize the budgetary constraints within which you must make your allocations. The scope of these constraints and availability of revenues for funding water development are now being debated by the Congress. One element of funding that is of great concern to GICA is the Administration's proposal to fund operation and maintenance of our inland waterways system with a one dollar increase in the tax on fuel used in tow boats, an increase of 525 percent. I will not elaborate at this time as our objections have been registered with the appropriate committees and the Administration. We do, however, remind you that enactment of a tax of this magnitude and so abruptly implemented will, without question, just as abruptly trigger a precipitous drop in waterborne commerce of comparable magnitude. The question will then be, why operate and maintain these waterways at all?

GICA asks for your consideration of the following specific appropriation requests. Included are our expressions of concerns that could effect future requirements for funding or effect the economic efficiency, the safety of the GIWW and environmental impacts. They are grouped by states, beginning with Texas on the western end of the GIWW.

Sargent Beach, Texas - GICA's testimony today again gives special emphasis to Sargent Beach. This past year, 1992, was a year of hurricane devastation. Andrew was a nightmare that will be long remembered like Audry, Frederick, and Camille. The simplistic assumption that it will be a long time before a comparable hurricane will bear down upon us may be comforting for some but has dubious validity. We can no longer rely upon this folksy, or for that matter even scientific, probability to continue protecting the GIWW at Sargent Beach. Immediate action is in order.

Last year Congress took action to make this possible. We thank the Congress for authorizing the Sargent Beach project in the Water Resources Development Act of 1992, with funds for the project to be appropriated one-half from the Inland Waterways Trust Fund and one-half with funds appropriated from the Treasury. We also thank this Subcommittee for recommending an appropriation of $1,000,000 to continue planning, engineering and design (PED). Furthermore, GICA extends its appreciation to Congress for including in the report accompanying the Energy and Water Development Appropriations Bill language directing the Corps of Engineers to reprogram funds to expedite PED.

It is our understanding that the Corps is adhering to this direction. The result - it now has a construction capability for FY94. The time required for completion of the project has been shortened to 1997, yet we must endeavor to shorten it more. Therefore, GICA requests that a sum of $6,000,000 be appropriated for Sargent Beach in FY94. An estimated $1.5 million will complete PED with the remainder for construction, which includes acquisition of lands, easements, rights-of-way and relocations during the year. Yes, it is a new construction start. No, we don't have the Administrations position on new starts. Some of you Subcommittee members have taken the time to go to Sargent Beach and observe first-hand the critical condition and have agreed that action is needed. Overwash is occurring, and it will take less than a hurricane to sever the narrow strip of land separating the GIWW from the Gulf. Unnecessary physical damage must be prevented, and damage to the economy must likewise be prevented. Industries and ports from Brownsville through Corpus Christi, Port Lavaca, Victoria and on north to Freeport and Houston are heavily dependent upon the GIWW and will be holding their breath until the waterway at Sargent Beach is again secure. Sargent Beach is a justifiable new start.

Furthermore, on March 10-12, I led a group of port, waterways and business interests to Mexico City to meet with their counterparts in Mexico on the proposal to construct a Gulf Intracoastal Waterway in Mexico connecting with ours at Brownsville. We returned home with great optimism for the future of this undertaking. It will be financed by Mexican state and private sector interests. It will provide immense benefits to the United States with or without the North American Free Trade Agreement. For this project be successful, our GIWW must remain a viable waterway, and geography makes the protection of the GIWW at Sargent Beach a key component of its viability. This was reiterated during the during the International Conference on the Maritime System for the Americas this past week in New Orleans where I delivered a paper on the Mexican GIWW.

Corpus Christi Bay - Port Isabel, Texas Section 216 Study - Several years ago, the Corps of Engineers recommended that Section 216 Studies be initiated in segments for the GIWW from the Sabine River to Port Isabel near the Mexican border. Two, were funded before last year - the segment including Sargent Beach and the segment including the Aransas National Wildlife Refuge. Sargent Beach is ready for construction and the feasibility report for the Aransas segment will be completed in FY94.

Last year GICA requested Congress to appropriate funds to begin a similar study of the segment of the GIWW between Corpus Christi Bay and Port Isabel. You responded by appropriating $300,000 to begin the reconnaissance phase of this study which is to be completed in FY94. What the budget request is for FY94 we do not know, but sufficient funds must be appropriated to include the urgently needed environmental assessment of the GIWW between Corpus Christi Bay and Port Isabel. Furthermore, this study must include the development of a long-range dredged material placement plan. The Texas Department of Transportation, the non-federal assuring agency for the GIWW in Texas, must have this plan to secure funds from the Texas Legislature to acquire the land needed for placement of dredged material in an orderly manner. Congress appropriated funds to begin the study because of the urgency for completing the environmental assessment and the dredged material placement plan. If they are not done soon, the GIWW between Corps Christi and Port Isabel could cease to function as an economically viable an environmentally safe waterway. In making the appropriation to continue this study, Congress may wish to re-emphasize the necessity for quickly completing these components of this study.

High Island - Brazos River, Texas Section 216 Study - GICA urges initiation of the reconnaissance phase of this study for the same reasons we requested funding of the Corpus Christi Bay - Port Isabel Study. We request funding in an amount consistent with the Corps of Engineers' capability.

Aransas National Wildlife Refuge, Texas Study - GICA requests sufficient funds to complete the feasibility study for this very important project. We also wish to bring to your attention the cooperative, volunteer effort among private sector towing and shipping interests, government agencies and environmental groups to protect the shallow ponds which are critical components of the whooping crane's winter habitat. Last year this volunteer effort ended, and the federal agencies will carry on. On this project private sector interests have spent over $200,000, excluding the value of their labor. This cooperative effort was accorded nation-wide recognition. Those participating deserve our commendation as well.

Brazos River GIWW Floodgates, Texas - Based upon the criteria for "rehabilitation" contained in the Water Resources Development Act of 1992, the Inland Waterways Users Board recommended in its annual report that the Brazos River Flood Gates be rehabilitated with 1/2 the funds to be appropriated from the Inland Waterways Trust Fund and 1/2 from funds appropriated from the Treasury. GICA concurs in this recommendation, and urges early rehabilitation of this structure.

Industrial Canal Lock, Louisiana - Last year we reported that progress is being made in replacing the antiquated Industrial Canal Lock on the GIWW at New Orleans. This year, we are extremely please to report to you that the Assistant Secretary of the Army for Civil Works has "concurred in the in the recommendation of the Corps of Engineers to focus further studies of replacement for the Industrial Canal Lock on Plan 6, north of Claiborne Avenue," This is a giant step toward construction of this badly needed lock as there is a consensus among all parties involved that this is a workable solution which will provide for more efficient water transportation while addressing the needs and concerns of the community. The Corps of Engineers is to be congratulated for bringing this project this far. We thank you for your continuing appropriations of funds for this project. We also thank you for your patience during this long arduous process.

Intracoastal Waterway Locks, Louisiana Study - GICA supports continuing funding of the Intracoastal Waterway Locks, Louisiana Study (formerly called the Algiers Lock Study), which includes all the locks on the GIWW in Louisiana west of the Mississippi River. Information on what locks need to be rehabilitated or replaced, and in what order of priority, is needed so that the necessary work on these locks can be completed as soon as possible. This effort can greatly enhance the capability of the GIWW to provide safe, efficient and economical transportation.

The need for replacement and/or rehabilitation of Locks on the GIWW in Louisiana was boldly blazoned across TV screens and newspapers of the nation in February when the Coast Guard had to close the Alternate Route of the GIWW because wakes of tows were threatening structures during high water. The other locks on the GIWW connecting to the Mississippi were inadequate to handle any of the additional traffic. At one time during the 14 day closure, 136 tows were waiting to lock through Algiers Lock. The estimated losses to the towing industry alone were estimated to be in excess of $300,000 per day. The impact was felt by customers from Pennsylvania, to Florida to Texas.

Morganza, Louisiana to the Gulf Comprehensive Study - This study was authorized by Congress last year and $400,000 was appropriated to initiate it as a part of the Mississippi River and Tributaries Project. Both the GIWW Alternate Route and the main route of the GIWW between Bayou Lafourche and Bayou Boeuf Lock are within the study area. A major objective of this study is to find a solution to the flooding mentioned above. The long-term solution to the high water/wake problem on the Alternate Route will be sought. Bank erosion and wetlands loss, which threaten the GIWW and other navigable waterways will also be addressed. GICA urges adequate funding to continue this study.

Alabama Sturgeon - Designation of critical habitat for the Alabama Sturgeon still is of great concern to GICA. Viability of the Tennessee-Tombigbee Waterway and the Mobile, Warrior, Tombigbee, and Alabama Rivers could itself be endangered because maintenance dredging could be halted or maintenance costs increased astronomically. The irony of the situation is that stopping maintenance dredging could reduce the strain on O&M expenditures. An apparently supportable scenario, but one that would also increase your freight bill and possible close some water dependent industries and business. These navigable rivers, along with the Appalachicola, Chatahoochee and Flint Rivers today are major carriers of timber, wood and wood products, so vital to the economy of the Gulf Coast states.

Operations & Maintenance Cost Increases - We can expect additional costs to be incurred in O&M. the FY93 appropriation for O&M on the GIWW from Brownsville to St. Marks, Florida was $29,304,000. This compares with $33,767,000 for FY92 - a decrease of 13%. How long can we continue to have an efficient, safe artery of transportation with reduced O&M appropriations?

Increased demands for wetlands protection and creation have occurred since we testified last year. Last year we gave you the example of the Mississippi River Gulf Outlet. This year, it is the eighteen-mile reach of the GIWW between Chactawhatchee and West Bays in Florida known as the "Grand Canyon." We have been informed that future maintenance of this reach of the GIWW is contingent upon implementing a bank stabilization plan acceptable to the State of Florida.

The triggering mechanism in these situation was the "consistency" provision of the Coastal Zone Management Act. We can expect more projects stopped and the cost of constructing and maintaining projects to go up, especially maintenance dredging, as this provision of the CZM Act is invoked more frequently. It soon may be operative in Texas which is developing its CZM plan for submission to NOAA for approval. When approved, the entire GIWW and many navigable channels tributary to it from the Sabine River to the Rio Grande will be subject to the "consistency" provision.

Effects of Urbanization on Navigation - We again express our concern about urbanization which is increasing costs of land for placement of dredge material in Florida and Alabama. The increasing competition for land and reluctance of landowners to give long-term commitments of their property to dredged material disposal will not only increase the cost of O&M but will create restraints upon availability of disposal areas at any cost.

Another potential urban impact on the cost of O&M is urban water requirement. Proposals to increase water withdrawals from the headwaters of the Chatahoochee and Coosa Rivers for expanding urban uses in the Atlanta area are of great concern to both navigation and environmental interests. Adequate low flows must be maintained for navigation and fish and wildlife management. If the cost of O&M increases as a result of withdrawals which reduce the historical flows needed for navigation, this cost should be allocated to the cost of urban withdrawals. We are extremely pleased that the Corps of Engineers has been authorized to undertake this much needed study to provide guidance in this situation.

The GIWW carries 115 million tons of cargo, making it one our nation's major waterways. GICA's sole objective is to assure that it is adequately maintained and improvement are made when needed so that it will continue to serve us in this capacity. Our requests for funds and concerns expressed herein contribute to this objective.

Again, thank you for inviting us to testify this year.

ADDITIONAL PREPARED STATEMENTS

Senator JOHNSTON. There are several other statements related to the Gulf Intracoastal Waterway which I will incorporate in the record at this point.

[The statements follow:]

STATEMENT OF JOHN DUEKER, PLANT MANAGER, BP CHEMICALS GREEN LAKE COMPLEX, TX

My name is John Dueker and I am the plant manager of the BP Chemicals Green Lake Complex, located near Port Lavaca, Texas. I am also executive vice president of the Coalition To Save the Gulf Intracoastal Waterway. I am providing testimony today as a representative of the coalition.

Both BP chemicals and the coalition will be submitting written testimony in support of the Sargent Beach project.

The key points I would like to communicate today are the national and international impact of a closure of the Intracoastal Waterway at Sargent Beach, and the lack of alternatives to maintain this vital economic activity.

The erosion of the beach caused by the natural winds and waves of the Gulf of Mexico is continuing. Additionally, the wave action associated with a hurricane would likely breach the barrier lands and open the waterway to heavy silting and the wave action of the open gulf, effectively closing the waterway.

If a closure of the waterway were to occur effects would ripple through the domestic economy which would impact gasoline prices, the supply and prices of fiber for clothing, metals, and a whole host of plastic and other materials. These disruptions could then impact jobs in industries which further process the materials in States such as Virginia, West Virginia, Mississippi, Louisiana, North Carolina, South Carolina and more.

Shifting to the international front, some products moving through the waterway are either exported as is or further processed and exported. The petrochemical and chemical industry has been a bright spot in the United States balance of trade. The loss of literally billions of dollars in exports would have a dramatic effect on this trade balance.

I believe you have heard testimony earlier regarding the time duration involved in making a repair to the waterway, and I would like you to consider what would happen during that repair. It would be impossible to get enough trucks to serve as a transportation alternative. For the BP chemicals plant alone, over 110 trucks per day would be required to move the equivalent materials. Consider the impact of this on the highway system, the supply of truck tractors and trailers when it is multiplied by the number of plants effected. It is truly an impossible situation.

In summary, I would like to strongly encourage the appropriation of the $6 million dollars to allow this vital project to proceed as quickly as possible. Further, I encourage the committee to provide language which would expedite the Corps of Engineer's completion of this project. The exposure of Sargent Beach to unnecessary hurricane seasons is an unwarranted risk for the national economy.

Again, thank you for this opportunity.

STATEMENT BY A FRIEND OF THE GULF INTRACOASTAL WATERWAY

Chairman Johnston, members of the subcommittee, distinguished guests, thank you for the privilege of being allowed to give testimony today.

More than 40 years ago, the Gulf Intracoastal Waterway was created to provide safe passage for marine vessels and to promote industrial growth for the Texas economy.

This waterway has fulfilled these dreams and continues to fuel the Texas economy. The Intracoastal Waterway has become a vital link in the economy not only of Texas, but of this great Nation. This chain of waterways has industry that provides products and materials used worldwide.

In Calhoun, Victoria, Jackson and Matagorda Counties alone, there are seven major petrochemical industries which ship products safely through the intracoastal waterway.

A chain is only as strong as it's weakest link and the weak link is at Sargent Beach. If not shored up, repaired or fixed soon this vital artery of commerce will breach and will cost thousands of jobs and millions of dollars, not only to Texas but the commerce of this country.

Members of the subcommittee, you have the documented facts before you. I urge you to act swiftly on this request before some hurricane breaches the Gulf Intracoastal Waterway or the ever increasing acceleration of erosion washes away a vital industrial lifeline of this Nation.

Chairman Johnston, this is just like a prairie fire heading for the propane tank. If we don't put out the fire we will lose the farm.

STATEMENT OF JUDGE LOY SNEARY

My name is Loy Sneary. I am a County Judge and Emergency Management Director of Matagorda County, Bay City, Texas. I thank you, Mr. Chairman, for the opportunity to provide testimony today in support of the Sargent Beach Project and its impact on Matagorda County.

The social and economic impact on Matagorda County, should the Gulf Intracoastal Waterway be breached, would be significant. Already seven blocks of homes have been lost to the accelerated beach erosion.

Matagorda County has a significant and developing tourist trade centering around saltwater sport fishing, which is a major part of the state's $586 million sport fishing industry to which the GIWW plays a major role, providing safe transportation along the county's coast line. It is also a passage way for migratory fish, thus enhancing the marine ecosystem.

Related to the sport fishing industry is the commercial seafood industry that is significant to the county, providing hundreds of jobs and $40 million to the local economy.

When the GIWW is breached, which can be caused by a mere Gulf storm of less that hurricane strength, the recently built Matagorda Harbor, built to service sport fishing and boating and the turning basin at Palacios which provides service to the county's commercial fishing industry and would be severely impacted.

The combined cost to construct these two facilities was well over $10 million, with anticipated and projected expansion to nearly double that figure.

The daily cost to the industries I have discussed could be devastating, since they run on such close profit margins. With over 18 percent unemployment countywide and the loss to the economy related to that figure, Matagorda county's economy cannot afford the loss of commerce generated by the GIWW.

As is the case with many other coastal counties, Matagorda County has a significant Petrochemical industry. I Spoke last Friday with managers of these companies. One of these managers emphasized that without the reliability of the GIWW, his company would be compelled to build a $10 to $12 million rail car handling facility and there would be an additional $3–4 million increase in fuel stock and product handling costs. Another manager told me that the loss of ability to transport product by barge could cost his plant up to $600,000 per day.

Still another county businessman tells me his gasoline and diesel distributorship receives six barges per month at his terminal facility, and carries 4½–6 million gallons of gasoline and diesel per month. This amounts to $3.6 million per month of sales through his terminal. That terminal in our county supplies six and sometimes eight counties with product. A loss of those dollars would severely impact our county, whose total population is less than 40,000.

The Petrochemical industry is a major player, contributing to our nation's most critical balance of payments. One company alone exports over 35 percent of its product, and closure of the GIWW for even a short period of time would greatly affect trade with those foreign customers.

One of the significant considerations regarding our county's petrochemical industry is the immediate competition that would be created for equipment to transport feed stocks and product. Even those companies who do not currently utilize the waterway would suffer as they compete for the additional one million rail cars and three and a half million tank cars, which would be needed. The chaos that would be immediate in our local industry should that waterway be close even for 30–60 days is obvious.

Matagorda county is a vital link of one of the major highway arteries in our state. Highway 35, which runs the length of our county, connects many of the major petrochemical plants in our state. Our county is in the middle of that highway. As Emergency Management Director for our county, I do not need to tell you about the exponential increase in risk and exposure to our citizens by increasing the transportation of hazardous and toxic materials due to a breach of the GIWW.

The environmental impact of such a breach could be devastating, jeopardizing nearly 10,000 acres of designated wetlands in Matagorda County. Should the barrier beach separating the GIWW from the sea be lost along this eight mile area and incidentally, some areas now are less than 300 feet in width, the environmental degradation would indeed be a real concern. Should the current erosion of Sargent Beach go unchecked, the critical habitat for threatened or endangered species in the Brazoria National Wildlife Refuge and adjoining private lands could be lost.

As a rice farmer and cattle raiser, I look forward to the increasing potential of trade with Mexico, Central America, South America, and the Caribbean. The GIWW is a vital link in the transportation of agricultural products. The global economics of agriculture can make the cost of transportation the determining factor in markets gained and markets maintained.

Given the competitiveness in foreign markets, the loss of transportation for even a short time for rice, beef and other farm products grown in our county, could mean the loss of established export markets.

It amazes me that a study on the Sargent Beach Issue was released by Texas A&M in 1972 stating that the project to save that barrier beach should be done immediately. 21 years later we are still trying to get it off the ground. Private industry does not have the luxury of responding this slowly, and yet is private industry and local economies like ours in Matagorda County which will suffer as a result of this slow action.

I implore you to combine all your resources to expedite this project. Every future hurricane season we face brings with it devastating possibilities for the loss of the GIWW in our county. The time is now for decisive and innovative action on this project.

Thank you again for this opportunity to express the concerns of the citizens of Matagorda County.

CORPUS CHRISTI SHIP CHANNEL, TX

STATEMENT OF HARRY G. PLOMARITY, EXECUTIVE DIRECTOR, PORT OF CORPUS CHRISTI AUTHORITY

Senator JOHNSTON. Next, we have the Port of Corpus Christi, with Harry Plomarity, who is executive director. Please proceed.

Mr. PLOMARITY. Thank you, Chairman. I appreciate the opportunity to be appearing before you this afternoon, seeking appropriations on behalf of the Port of Corpus Christi for fiscal year 1994.

Our port authority has long been a major economic stimulus to the local economy. And the support that we receive from the Federal Government through the U.S. Corps of Engineers is critical to the successful operation of our port.

Our port currently has a full 45-foot draft channel, the deepest on the gulf coast. The Corpus Christi Ship Channel affords the safe and economical movement of over 74 million tons of cargo each year, making our port the sixth largest in tonnage and the third largest in import tonnage of all U.S. ports. The maintenance of this Federal waterway requires an annual Federal appropriation in excess of $10 million per year.

Additional improvements to our channel, which will further improve efficiency and safety, have been under consideration for some time. This would take the form of deepening and widening different sections of the channel. Toward this effort, we request funds, approximately $500,000, be appropriated to initiate the reconnaissance phase of the feasibility study for the Corpus Christi Ship Channel 50-foot project.

While separate from the Corpus Christi Ship Channel, the Gulf Intercostal Canal provides a vital transportation link for our south Texas economy, which permits the economic and safe transportation of over 71 million tons of cargo along the gulf and east coasts of the United States. This vital waterway is in danger of being severed along a 10-mile strip of coastline near Sargent, TX. The erosion rate is now estimated by the Galveston District Corps of Engineers to be an average of 30 feet per year. The recommended plan of action will ultimately require an expenditure of $70 to $80 million to permanently correct this problem. Funds must be appropriated now for necessary real estate acquisition and completion of final design in order to complete this project in a timely manner before Nature closes this waterway.

Gentlemen, we are extremely supportive of other appropriation requests presented to you earlier relative to the critical need for maintaining the Gulf Intercostal Waterway.

Your favorable consideration of these appropriation requests will result in increased competitive utilization of our port and provide for additional jobs and positive contribution to the economy of south Texas. Thank you again for the opportunity to present our concern for the continued operation of both the Corpus Christi Ship Channel and the Gulf Intercostal Waterway.

Thank you, Senator.

Senator JOHNSTON. Thank you very much, Mr. Plomarity. We are well aware of the Sargent Beach problem and, as you know, we have devoted ourselves to that problem and we will try to keep that from being closed. I have seen those pictures and know what it looks like.

Mr. PLOMARITY. Thank you so much.

Senator JOHNSTON. Thank you. And thanks for bringing Dale with you.

Mr. MILLER. Thank you again.

[The statement follows:]

STATEMENT OF HARRY G. PLOMARITY

My name is Harry G. Plomarity, Executive Director of the Port of Corpus Christ Authority.

I appear before you today seeking appropriations on behalf of the Port of Corpus Christi Authority. Our port authority has long been a major economic stimulus to the local economy. The support we receive from the federal government via the U.S. Corps of Engineers is critical to the successful operation of our port.

Our port currently has a full 45-foot draft channel, the deepest on the Gulf Coast. The Corpus Christi Ship Channel affords the safe and economical movement of over 74 million tons of cargo each year, making our port the sixth largest in total tonnage and third largest in import tonnage of all U.S. ports. The maintenance of this federal waterway requires an annual federal appropriation in excess of $10,000,000 per year.

Additional improvements to our channel, which will further improve efficiency and safety, have been under consideration for some time. This would take the form of deepening and widening various sections of the Corpus Christi Ship Channel. Toward this effort, we request funds (approximately $500,000) be appropriated to initiate the reconnaissance phase of the feasibility study for the Corpus Christi Ship Channel (50-foot) Project.

While separate from the Corpus Christi Ship Channel, the Gulf Intracoastal Waterway (GIWW) provides a vital transportation link for our South Texas economy which permits the economic and safe transportation of over 71 million tons of cargo along the Gulf and East Coasts of the United States. This vital waterway is in danger of being severed along a ten mile strip of coastline near Sargent, Texas. The erosion rate is now estimated by the Galveston District Corps of Engineers to be an average of 30 feet per year. The recommended plan of action will ultimately require an expenditure of $70 to $80 million to permanently correct this problem. Funds must be appropriated now for necessary real estate acquisition and completion of final design in order to complete this project in a timely manner before nature closes this waterway.

Gentlemen, we are extremely supportive of other appropriation requests presented to you relative to the critical need for maintaining the Gulf Intracoastal Waterway.

Your favorable consideration of these appropriation requests will result in increased competitive utilization of our port and provide for additional jobs and positive contribution to the economy of South Texas. Thank you for the opportunity to present our concern for the continued operation of the Corpus Christi Ship Channel and the Gulf Intracoastal Waterway.

REORGANIZATION OF THE CORPS OF ENGINEERS

STATEMENT OF ROBERT S. KEENER, PRESIDENT, NATIONAL FEDERATION OF FEDERAL EMPLOYEES

Senator JOHNSTON. Our last witness will be Robert S. Keener, who is president of the National Federation of Federal Employees.

Mr. Keener, a pleasure to have you. here today

Mr. KEENER. Thank you, Mr. Chairman. My name is Bob Keener. I am the president of the National Federation of Federal Employees. On behalf of the national federation, I am pleased to appear before you today to present an innovative, cost-effective plan to reorganize and downsize the U.S. Army Corps of Engineers. This plan, which was developed by the National Federation Council of Corps of Engineers Locals, achieves greater cost savings than those plans developed by the Corps and minimizes the negative economic impact usually associated with downsizing efforts. The union represents 150,000 Federal employees in 53 agencies across the country and is the exclusive representative of employees of the Corps of Engineers, as well as many of the Federal employees in your State of Louisiana.

Over the past few years, the Corps of Engineers has been the target of numerous attempts to streamline and reduce the scope of its operations. Fewer traditional projects, shrinking workload, workload/workforce imbalances, loss of technical expertise, and high overhead costs drive these attempts.

However, the early reorganization plans have never been implemented due to resistance from Congress and from groups such the National Federation of Federal Employees, who opposed the reorganization plan and the faulty assumptions underlying the previous plans.

The most recent of these plans was introduced on November 19, 1992, and has been withdrawn until both the Congress and the new administration have fully reviewed the plan and its impact on the Corps' ability to perform its critical mission.

The NFFE Council Corps of Engineers Locals recognizes the need to reduce the Corps' overhead costs and establish an effective and efficient management structure. In developing our recommendations for the reorganization of the Corps, we remain cognizant of the directions provided by Congress and this subcommittee, and by the Corps through its own internal rules and studies.

Our recommendations as well as our analysis of the November 19, 1992, reorganization plan are attached. In sum, our analysis indicates that the elimination of division offices, as recommended by the Corps in its 1992 report, would achieve most if not all of the Corps' objectives of reducing costs, increasing flexibility, and maintaining its competence. If implemented, the elimination of division offices would save the Federal Government over $121 million annually after the first 8 months. Moreover, our recommended reorganization would be accomplished without disruption of service to the Corps' customers or to the Nation.

Senator JOHNSTON. Do you close any districts?

Mr. KEENER. Districts? No, sir; division offices, yes. Finally, the elimination of the division offices as outlined would impact only 2,139 employees as compared to the 7,600 under the headquarters of the Corps' adopted plan.

In light of these issues, we ask that no funds be appropriated for the Corps model of reorganization.

Mr. Chairman, this concludes our testimony. Again, I appreciate very much the opportunity to appear before you today and to present our views. I would be happy to answer any questions that you may have.

Senator JOHNSTON. Well, Mr. Keener, thank you very much for this presentation. This is a very serious problem, as you know. We could indeed save a lot of money, according to the Corps, by closing several district offices. But the Congress does not want to do that, and we want to do what the Congress wants us to do.

So for you to come up with an alternative way of accomplishing this is very valuable to us. We have not had a chance to study this at length, but our first step will be to ask the Corps to comment in depth on it. I hope they will talk to you about it and interact with you to get these ideas.

Maybe we can use this as a model to save that money, which we need to save. We indeed do have overhead costs that are much too high with the Corps. And we would like to save as many jobs as possible. We have the same interests that you do. We want to save those jobs, especially in Louisiana. I hope your plan has given special attention to that. [Laughter.]

Seriously, we want to save jobs everywhere where we can, but at the same time save some money and make the Corps of Engineers efficient and productive in the new budget reality. So you made a very valuable contribution to us, and we thank you very much for it.

Mr. KEENER. Thank you, Senator, for your very kind attention.

[The statement follows:]

STATEMENT OF ROBERT S. KEENER

Mr. Chairman and distinguished Members of this Subcommittee, on behalf of the National Federation of Federal Employees (NFFE), I am pleased to appear before you today to present an innovative plan to reorganize and downsize the U.S. Army Corps of Engineers (USACE). This plan, which was developed by the NFFE Council of Corps of Engineers Locals, achieves greater cost savings than plans developed by the government and minimizes the negative economic impact usually associated with downsizing efforts. The NFFE represents 150,000 federal employees in 53 federal agencies across the country and is the exclusive representative of employees of the Corps of Engineers.

As you know, over the past few years, the Corps of Engineers has been the target of several attempts to streamline and reduce its operations. Fewer traditional projects, shrinking workload, workload/workforce imbalances, loss of technical expertise and high overhead costs drive these attempts. However, the early reorganization plans have never been implemented due to resistance from Congress and from groups such as the NFFE who oppose the faulty assumptions underlying such plans. The most recent reorganization plan which was introduced on November 19, 1992 has been withdrawn until both the Congress and the new Administration have fully reviewed the plan and the impact it would have on the Corps' ability to perform its mission.

The NFFE Council of Corps of Engineers Locals recognizes the need to reduce the Corps' overhead cost and establish an effective and efficient management structure. In developing our recommendations for the reorganization of the Corps, we remain cognizant of the directions provided by Congress and this Subcommittee and by the Corps through its own internal studies.

Our recommendations as well as our analysis of the November 19, 1992 reorganization plan are attached herein. In sum, our analysis indicates that the elimination of Division offices, as recommended by the Corps in its November 19, 1992 report would achieve most if not all of the Corps' objectives of reducing costs, increasing flexibility and maintaining its competence. If implemented, the elimination of division offices would save the federal government over $121 million annually after the first 8 months. Moreover, our recommended reorganization would be accomplished without disruption of service to the Corps' customers or the nation. Finally, the elimination of division offices as outlined in our plan would impact only 2,139 employees as compared to 7,600 employees under HQ USACE's adopted plan.

Mr. Chairman, this concludes our testimony. Again, I appreciate the opportunity to appear before you today to present our views. I would be happy to answer any questions you may have.

NATIONAL FEDERATION OF FEDERAL EMPLOYEES:

ANALYSIS OF U.S. ARMY CORPS OF ENGINEERS REORGANIZATION PLAN

Background:

The drive to reorganize, downsize, and streamline the Department of Defense has impacted all aspects and functions of the DOD. Of importance to the National Federation of Federal Employees is the U.S. Army Corps of Engineers which has been the target of several reorganization attempts over the past few years. Congress, in enacting the Energy and Water Appropriations Act for FY93, directed the Assistant Secertary of the Army for Civil Works to reduce the overhead costs of the Corps of Engineers; to reduce the flow of paper work to higher headquarters; and to stop micromanaging districts from the top. Despite that directive, reorganization plans continue to proliferate, and, in many areas, implementation is underway. The most recent reorganization plan was introduced by General Williams on 19 November 1992.

The National Federation of Federal Employees, as the exclusive representative of the Corps of Engineers, has unique insight into and knowledge of the work performed by the COE at the district and division level. Our analysis of the latest COE reorganization plan indicates:

* The implementation cost would exceed the Corps estimate by over 400 percent

* Will result in the loss of over 64,100 years of experience in the nation's largest engineering organization

* The Plan would increase the mid- and upper-level management ratio to line employees

The purpose of this document is to present an independent analysis of the latest COE reorganization plan. We urge Congress to place the Corps reorganization plan on hold until Congress and the new administration has fully reviewed the proposed plan and the impact it will have on the Corps' ability to perform its mission.

Why Reorganize, Stated Reason:

The reasons for reorganization, as stated by Corps leaders, are:

* Fewer traditional projects
* Shrinking workload
* Workload/workforce imbalances
* Loss of technical expertise
* High overhead costs

Each of these stated reasons needs to be examined before being accepted at face value. Each reason must be based on valid historical fact and a realistic projection of the Corps' role in the future.

* **Fewer traditional projects** is only an important consideration if those traditional projects remain the backbone of the Corps as the future of this Nation and the world unfolds. This 1992 philosophy is inconsistent with the Corps' vision published in pamphlets and articles in 1989. In 1989 the Corps envisioned a Corps of Engineers in new and diverse roles: e.g., proactively handling environmental concerns, rebuilding the Nation's

infrastructure, and supporting the space program. The Corps' 1989 vision did not materialize under the Bush Administration, however, the new Administration's agenda appears to support this vision.

- A shrinking workload is dependent on what time in history one views. The total workload since 1976 is significantly *higher* than it was in the previous ten years. The only traditional role of the Corps which shows a steady decline is construction. The workload in other traditional roles of the Corps has varied over the last 30 years, but a pattern of steady decline cannot be established. The Corps' military role declined more than any other program from 1962 to 1972, yet under the next three Administrations the military program grew, and it has remained fairly constant since 1986. The role of the Corps of Engineers into the year 2000 may change significantly as the new Administration's plans for investment in America take shape and as the new world order is established. Indeed, the Corps' future role will be defined and redefined as the future of this Nation and the world unfolds. Truly, the workload of tomorrow is dependent upon the Corps' mission as envisioned by Congress and the Administration. The only question is: will the Corps be there as in the past to accept and meet these challenges?

- Workload/workforce imbalances should be a day-to-day consideration of the Corps' leaders, not an issue that they address once every 50 years. Workload/workforce imbalances have existed in the Corps for over three decades. In all but the rarest occasions, the imbalance was resolved by supplementing the Districts' workforce with contracts with local engineering firms.

- Loss of technical expertise is a critical consideration only if one assumes the Corps' current technical expertise is lacking. Given the broadly recognized high quality of the Corps' products and services, this reason would be a consideration only under a Reorganization Plan that would cause the Corps to lose the technical expertise it has under its current structure. Under the Corps' adopted Reorganization Plan, such a loss is assured. By the Corps' own projections, it will lose 70% of its professional and technical staff in engineering, design, and planning at 21 Districts. This equates to over *64,100+ years of experience*, and encompasses the hazardous, toxic, and radiological waste (HTRW) remediation design at one of the two recognized centers of expertise, the Kansas City District. The HTRW remedial design expertise at Kansas City is an accumulation of a 10-year effort. The Corps' Reorganization Plan will require seven of the new HTRW centers to develop the expertise that will be lost from Kansas City. Clearly, the loss of technical expertise will be a reality after this Reorganization.

- High overhead costs appears to be a reality of modern day business, and is generally attributed to intermediate layering of management and initial investment and modernization/refinement of processes and functions, both of which are the case with the Corps. Most major corporations' answer to high overhead is the elimination of layered management and decentralization of authority, a concept which the Corps rated slightly below its adopted Plan. The Corps' Plan cuts 8% from its production line forces, but only 7% from its overhead functions, which include Division Offices, Administrative Centers, F&A Centers, and Central Review Center. These cuts actually result in a net *increase* in overhead. A strong argument can be made that the Corps' overhead was lower before the Corps became a major command and before the implementation of the Corps' Programs and Project Management (PPM) organizations. Therefore, it can be inferred that the Corps' concern regarding overhead is not expressed in its past or current decisions relative to the Corps' management structure.

Reorganization Objectives and Selection Criteria:

The Corps' reorganization objectives are summarized as cost efficiency, flexibility enhancing, competence maintaining, and last, management effectiveness. The indicators for each these objectives varied from objective to objective, and for the most part are reasonable.

The Corps evaluated only three organizational concepts against these four fundamental objectives. These concepts were identified as Headquarters 1 (HQ1), Headquarters 3 (HQ3), and Eliminate Divisions (ED). Each objective was given equal weight, with a total possible score of 1.0 for all three concepts.

The evaluation of each concept must be analyzed if and when all the data is available.

Concept Ranking

Concept	Order of Merit	Difference
HQ3	.372	
		.005
ED	.367	
		.105
HQ1	.262	
Total	1.001	

(For a detailed description of each of these concepts, see the U.S. Army Corps of Engineers REORGANIZATION PLAN and the Report of the Division and District Organization Task Force, dated July 1992.)

Here, it is imperative to note the difference in the order of merit between HQ3 (the adopted Plan) and Eliminate Division was only five one thousandths (.005) of a point. With such a close difference, a cost/saving analysis must be performed on both the HQ3 and ED concepts, with that analysis becoming a part of the report. This was not done. Why? The failure to perform such a cost/saving analysis **is a fatal error** in the Corps' Reorganization Plan.

The selected Reorganization Plan will result in the elimination of 5 Civil Works Divisions (down from 11 Divisions to 6 Divisions), the elimination/consolidation of all planning, engineering, and real estate functions at all Districts to 15 Technical Centers which will be collocated with 15 Districts, the consolidation of all military design and construction at 10 Districts collocated with Technical Centers (8 of which will be staffed for HTRW remediation design), and the establishment of 1 Administrative Center within each new Division. The site selection criteria for the Divisions, Technical Centers, and Administrative Centers was identified as follows:

Divisions

High cost demerits
Good engineering school (within 75 miles)
Quality higher education (within 75 miles)
Large or medium air traffic hubs

Technical Centers

Same criteria as Divisions, plus
Relative number of technical personnel
Central to workload and geographic distribution

Administrative Centers
One per Division
High cost demerits
Quality higher education
Large or medium air traffic hubs

All current Districts would remain, but 21 Districts would have greatly reduced capabilities and staffing. These 21 Districts would in reality become operational and maintenance (O&M) Districts with some or limited PPM capabilities.

Here, it should be noted that the selection criteria for Divisions was applied to all Division offices, except the South Central Division at Vicksburg, MS. The arbitrary establishment of a 75-mile radius for good engineering schools and quality higher education has a negative impact on some locations. The availability of good engineering schools and quality higher education within any radius of a Division, Technical Center, or Administrative Center is not necessary for recruiting purposes. What is important is quality higher education for graduate work and continuing education within the metropolitan area of these organizations. Corps' Districts routinely recruit from universities and colleges all across the country. Thus, the consideration here should be on engineering graduate work and continuing adult education within the metropolitan area, but not necessarily within a 75-mile radius.

Implementation Cost/Savings:

The Corps states that national averages were used for all of its factors. The Corps' implementation cost and projected annual savings, from Annex E of the Plan, is based on several assumptions including:

- Eliminate 2,600 full time equivalent (FTE) positions (2,350 at District level and 250 at Division level)
- Average Division salary is $45,000
- Average District salary is $35,000
- 7,600 positions impacted (including those eliminated) (6,470 at District level and 1,130 at Division level)
- 30% of the impacted employees will relocate and involve permanent change of station (PCS) cost 1/
- 30% of the Division employees are eligible to retire under a reduction-in-force (RIF) situation, and 18% of the Division employees impacted will retire (See footnote 1)
- 20% of the District employees are eligible to retire under a RIF situation, and 12% of the District employees impacted will retire (See footnote 1)
- 10% of the impacted employees will leave through attrition
- 42% of the Division employees impacted will receive severance pay (See footnote 1)

1/ These assumptions are totally subjective and contingent upon individual employee decisions concerning retirement and/or relocation. (See Appendix A.)

* 48% of the District employees impacted will receive severance pay (See footnote 1)

* Cost for moving office furniture equals $3,000 per impacted FTE

* Annual savings is based on only the elimination of FTE's

(All personnel data was based on FY91 year-end strength.)

While some of these assumptions and associated costs may be valid, others are not. Additionally, the Corps does not include in its implementation cost such items as:

* Loss of production caused by the reorganization

* Increased administrative cost incurred by the numerous personnel actions that will be required

* Cost associated with outplacement programs

* Cost associated with a major RIF

* Cost for lump-sum annual leave payment 2/

Any change in the stated assumptions, as well as inclusion of the items listed above, will impact the implementation cost and the projected savings.

If employees choose to relocate or exercise their rights under RIF action in any percentage greater than that assumed by the Corps, the Corps' implementation cost would escalate disproportionately. This can be clearly demonstrated using the Corps' assumption on relocation; for every percentage point increase in employees relocating, the Corps' implementation cost increases 1.5% or $3,235,000. Similarly, if one-half of the RIF actions at District level result in only one PCS, the Corps' implementation cost increases 42.7% or $77,640,000.

Based on our analysis and findings, we believe the Corps' Reorganization Plan is flawed in several areas and in its basic assumptions, as noted above. Two of its major flaws are -- its failure to do a cost comparison between its two highest rated reorganization concepts (HQ3-the adopted concept, and the Eliminate Divisions); and in its projection on implementation cost for concept HQ3. The latter error brings the cost effectiveness of the Corps' Plan into question. The Corps' cost analysis underestimates its implementation cost, overstates its annual savings, and does not include increases in day-to-day operating cost that will result under its adopted Plan, such as increased travel costs and increased salary costs from the saved-grade and saved-pay of RIF'd employees.

Our evaluation and cost analysis, for District offices only, clearly dictate that the Corps' Plan is cost prohibitive, with an implementation cost, for Districts only, of $725,992,000, capitalization cost ranging from $21,550,000 to $40,490,000, an annual savings of only $99,313,000.

From our analysis, the Corps underestimated its implementation cost by over 400% and overstated its savings by almost 20%. If the same understatement of cost and overstatement of savings are found in data for Division offices, as we believe they will be,

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2/ It is our understanding that the annual leave escrow account has a current shortfall.

the implementation cost for the Corps' proposed reorganization could exceed $1 billion, plus interest.

Additionally, the Corps' proposed reorganization failed to address the concerns expressed by Congress in passing the Energy and Water Appropriations Act for FY93. The Senate report directed the Corps to take three distinct actions for reorganization; reduce its overhead cost, reduce the flow of paperwork to its headquarters, and stop micro-managing its districts. The Corps Plan actually increases the mid- and upper-level management ratio to line employees, increases the flow of paperwork to new headquarter organizations, and, under separate action, requires most if not all District communications with Congress to be cleared through headquarters.

It is our strong recommendation that the Corps' Reorganization Plan be placed on hold until a cost analysis on the concept of eliminating Divisions is performed and a cost comparison is made between HQ3 and Eliminate Divisions.

Additionally, we recommend that strong bipartisan Congressional oversight of the Corps' plan to reorganize be exercised.

Appendix A

Independent Evaluation and Cost Analysis For Reorganization of District Offices

Our analysis of the Corps' projected implementation cost and annual savings centered on one factor -- people at the District level and the decisions they will have to make, that not only impact their lives and families, but also the Corps' projected cost and saving. These decisions -- to relocate, retire, quit, seek employment elsewhere, or exercise their RIF rights -- will, in the final analysis, determine if this Reorganization Plan is cost effective or cost prohibitive.

For our analysis, we used the Kansas City District as an average since it fits the national average for salary, years of federal service, percent eligible for standard retirement, and optional retirement under a RIF. We looked at the makeup of the employees, their jobs, their length of service, their eligibility for standard and optional retirement, and their retention standing. We did not look at only those employees whose positions were listed for elimination or relocation, but rather at all District employees. Under a major reorganization and its resulting RIF, all District employees will or could be affected through bumping and retreat rights.

We assumed that a majority of the employees eligible for regular retirement would wait for a RIF action so they might exercise their lump-sum payment option or placement option under retreat or bumping actions. This assumption is strengthened by the fact that they have nothing to lose by waiting for a RIF action, and while waiting, their retirement annuity continues to increase by .17% each month. Similarly, employees eligible for optional retirement must wait for a RIF action to be eligible for discontinued service retirement.

Moreover, absent some reasonable incentive, there is no advantage for these employees to take an early retirement in view of the reduction in their annuity that comes with discontinued service retirement. (An employee, 50 years of age, taking a discontinued service retirement with 25 years of service, at the average salary of $35,000 per year, suffers a 20% or $4,500 cut in their annual annuity over the annuity they could have received at age 55.) Indeed, unless the employees are placed voluntarily in one of the Technical Centers or find employment elsewhere, they must be terminated through the RIF action. Under the Corps' Reorganization Plan, the RIF'ing of one District employee could result in several relocation actions, each incurring PCS expenditures. We assumed that most of the new positions at the Technical and Administrative Centers would be filled either through voluntary Corps outplacement programs or through the DOD Priority Placement Program. Both programs require the Corps to pay for any incurred PCS expense.

The following facts were used in our analysis and related assumptions:

Average Kansas City District Employee	
Age	42
Number of children	1.7
Number of school age children	.6
Yearly salary	$35,575
Total household income	$54,330
Percent owning home	84%
Home value	$88,900

The years of service for Kansas City District employees is as follows:

No. of Years of Service	Percent	Accumulative %
More than 30 years	11%	11%
25 to 30 years	9%	20%
15 to 25 years	32%	52% 1/
10 to 15 years	20%	72%
3 to 10 years	21%	93%
Less than 3 years	7%	100%

1/ Most employees with 15 or more years of service are fully vested in the Civil Service Retirement System, and will either retire or transfer to a new job under the Corps' Reorganization Plan or under the DOD Priority Placement Program.

Nine percent of the District's employees are eligible for standard retirement, and an additional 11% would be eligible for discontinued service retirement under a RIF action.

Of the 530 positions remaining at the Kansas City District, 46% or 244 positions are similar to the positions being eliminated, and thus subject to some impact under a RIF action. To determine the possible impact of a RIF eliminating 533 professional and technical positions at the Kansas City District, a mock RIF was conducted on a Civil Engineering Technician, GS-11, with 27 years of service and a 5 point veteran preference. That mock RIF action impacted a total of eight positions and resulted in seven different PCS moves at a projected cost under the Corps' Reorganization Plan of $560,000, and a saving of $17,900 annually. While this may not be a typical cost for each RIF action, neither is it the worst case scenario, but rather is based on this evaluator's own position.

Our projection of the Corps' implementation cost for Districts is as follows:

Cost of PCS Moves = (# of Positions Impacted) x 47% 2/ x PCS Cost 3/

2/ The Corps assumed that 30% of the affected employees would transfer in its cost analysis, but assumed that 50% of the affected employees would transfer in its generic Environmental Assessment (EA) and Finding of No Signficiant Impact (FONSI).

3/ The Corps used $50,000 in its cost analysis. Based on a response from the Corps, to a Freedom of Information Act request by the International Federation of Professional and Technical Engineers (IFPTE) Local 49, the average cost of a PCS move is $80,000 (including relocation services) based on reorganization experience of HQ AMC. (Source: HQ AMC, Ms. Modena Gooley)

6470 x .47 x $80,000 = $243,272,000

Severance Pay = [(# of Positions Impacted) - (# of People Moving) - (# of People Retiring) - (# of People Leaving Through Attrition)] x $35,000 x 60%

(6470 - 3041 - 858 - 647) x $35,000 x .6 = $40,404,000

Office Furniture Moving Cost = (# of Positions Impacted) x $3,000

6470 x $3,000 = $19,410,000

Cost of PCS From RIF Actions at District = (# of Dist. Positions Available for RIF) x 46% x $80,000

11,492 x .46 x $80,000 = $422,905,600

Implementation Cost = (PCS + Severance Pay + Office Move + PCS's from RIF)

243,272,000 + 40,404,000 + 19,410,000 + 422,905,600= **$725,991,600**

INCREASED OPERATING COSTS RESULTING FROM REORGANIZATION

The following increase in operating costs is based on the required trips to field project and construction offices by Engineering and Planning Division personnel only. Data used in developing these costs was based on calendar year 1992 for the Kansas City District.

Field Project and Construction Office Trips by Engineering and Planning Divisions by one or more People

1-day trips = 492
2-day trips = 89
3-day trips = 32
4-day trips = 20
5-day trips = 7

Cost Increase Associated with Civil and Military Design being Performed by Nearest Technical Center, assuming only one person per trip, using a standard per diem rate and average airline fare from nearest Technical Center.

[# of trips X airfare] + [# of days X per diem] = Cost Increase

[492 X $320] + [1 X $66] =	$157,506
[89 X $320] + [2 X $66] =	28,612
[32 X $320] + [3 X $66] =	10,438
[20 X $320] + [4 X $66] =	6,664
[7 X $320] + [5 X $66] =	2,570
Total	$205,790

Assuming a similar increase to perform similar work for all 21 Non-Technical Centers, the Corps' Reorganization would result in a **$4,321,590** annual increase in operating costs, which will be passed on to the Corps' customers.

Annual Saving From Reorganization = [(# of Positions Eliminated) x Average Salary x Benefits x Related Office Cost] - Increase Operating Cost

(2350 x $35,000 x 1.20 x 1.05) - 4,321,590 = **$99,313,410**

Currently, most Corps of Engineers offices are housed in GSA leased property. Under such lease agreements, the lessee is responsible for costs of new or rehabilitation construction of office space. Average construction cost, including walls, telephones, and electrical outlets, but not including furniture and moveable partitions, is $8.00 per square foot 4/, with an average of 240 square feet per person at an average rental cost of $13.73 per square foot 5/.

Organization	No. of Employees
No. of New Positions at Technical Centers after Reorganization	3,049
Technical Centers before Reorganization	10,277
Non-Technical Centers after Reorganization	3,366

No. of New Positions at Technical Centers

3,049 X 240 X $8 = $5,854,080

Assume 20% of existing positions at Technical Centers will require rehabilitation.

10,277 X 20% X 240 X $8 = $3,927,168

Assume 50% of existing positions at Technical Centers will require rehabilitation.

10,277 X 50% X 240 X $8 = $9,817,920

Assume 100% of existing positions at Technical Centers will require rehabilitation.

10,277 X 240 X $8 = $19,635,840

Consolidation of office space at Non-Technical Centers Assume 50% require rehabilitation.

3,366 X 50% X 240 X $8 = $3,231,360

Consolidation of office space at Non-Technical Centers Assume 100% require rehabilitation.

3,366 X 240 X $8 = $6,462,720

New office furniture at Technical Centers for increased staff

3,049 X $2800 6/ = $8,537,200

Projected Range of Possible Capitalization Cost

$21,549,808 to $40,489,840

4/ Cost from recent experience in the Kansas City District.

5/ Square footage and rental cost data from the U.S. ARMY CORPS OF ENGINEERS REORGANIZATION STUDY, Prepared in Response to the Base Realignment and Closure Act of 1990.

6/ Based on a Corps' response to a Freedom of Information Act request by IFPTE Local 49.

FINDING

Our analysis is not based on the worst case scenario, but rather on a somewhat conservative approach, based on our knowledge and projections of the Kansas City District work force. If we have erred, it is in our projected cost of PCS's stemming from RIF actions which could increase the implementation cost over and above our projections. Based on our very limited mock RIF and historical records on RIF within the Kansas City District, our cost for this item may be on the low side. PCS cost is the one variable that could easily double the total implementation cost of any downsizing plan.

Clearly, our approach was not to sell the Corps' Reorganization Plan. The Corps' leadership has tried that twice. Our approach was to provide what we believe to be the realistic cost and saving under the proposed Plan. We did not, however, include increased salary cost stemming from RIF actions. Nor did we attempt any slight-of-hand tricks by saying that moving the technical reviews from Division to Technical Centers eliminates a level of review. That only changes where the review is performed, not the number of reviews, which is the real issue. Nor does our analysis contain any contingencies, which any good estimator would insist upon.

NATIONAL FEDERATION OF FEDERAL EMPLOYEES ALTERNATIVE TO THE U.S. ARMY CORPS OF ENGINEERS PROPOSED REORGANIZATION

The U.S. Army Corps of Engineers (USACE) has the largest number of civilian employees performing non-defense related missions of any Army major command, with approximately 40,000 civilian employees and 400 military personnel. In FY93 its program is over $10 billion, with approximately $4 billion in civil work and $6 billion in military related and work for other Federal agencies. The Corps' primary funding for its Civil Works Program comes from the Energy and Water Appropriations. The Military Program is funded through the DOD Appropriations. Additionally, a large amount of funding comes from reimbursable work for non-defense agencies, including the Environmental Protection Agency and the Department of Energy.

The Chief of Engineers, in 1988 initiated an evaluation of the Corps' mission, goals, and structure. Following the Corps' initiative in 1988, Congress, through the report language accompanying The Energy and Water Appropriations Act for Fiscal Year 1990, directed the Corps to look at its organizational structure. In response to the report language, the Corps, in June 1990, established a team, known as the Bayley Team, to look at the Corps' present structure and develop a report for Congress. The Bayley Report, presented to Congress on 4 January 1991, defined the criteria for reorganizing as reduced cost, flexibility, and competence. The Bayley Report provided a broad conceptual study of the Corps structure listing six organizational alternatives: status quo; realignment; regionalization; decentralization; elimination of divisions; and combinations of each.

Concurrent with the Bayley study, the Corps established a Reorganization Study Team, headed by Maj. Gen. Arthur E. Williams, then Division Engineer of the Lower Mississippi Valley, to develop a Reorganization Study in response to the Base Realignment and Closure Act of 1990 (BRAC). Initially, that Reorganization Study was incorporated into the BRAC process. In April 1991, Secretary of Defense Dick Cheney decided to remove the Corps' Reorganization Study from the BRAC process because of the Corps' large civil works mission. However, three months later, the BRAC Commission included the Corps' Reorganization Study in its recommendations to the President.

In the fall of 1991, Congress, through the following pieces of legislation, removed the Corps' Reorganization Plan from the BRAC process:

- **The Fiscal Year 1992 Energy and Water Appropriations Bill,** stated, "None of the funds appropriated in this act or any prior act shall be used to close any Corps of Engineers District or Division headquarters office."
- **The Fiscal Year 1992 Defense Appropriations Bill,** stated "None of the funds appropriated or made available in this Act or any prior acts shall be obligated or expended to implement the United States Army Corps of Engineers Reorganization Study until such reorganization is specifically authorized by law after the date of enactment of this Act."

HQ USACE selected HQ3 concept as its plan for reorganizing the Corps. HQ3 eliminated five division offices and reduced 21 district offices to operation and maintenance (O&M) districts with Program and Project Management functions. Like the previous BRAC plan, this plan was projected to achieve greater efficiency and effectiveness. Again, however, the Plan adopted by HQ USACE increased the ratio of management-to-employees, underestimated its implementation cost and overstated its savings.

Congress, however is rejecting the Corps' Reorganization Plan for its failure to achieve an effective and efficient management structure.

Like Congress, the NFFE Council of Corps of Engineers Locals recognize the need to reduce the Corps' overhead cost (which now consumes one dollar in every four) and establish an effective and efficient management structure. This is in keeping with NFFE's goal for over 75 years of promoting the highest standards and greatest efficiency in the service to the American taxpayer.

We recognize that this goal does not come without cost, but the cost must be fair, equitable, and achieve true efficiency. With this in mind, the Council and NFFE National office adopted the recommendations contained in this document.

We believe that if the Congressional direction had been followed the Corps' Reorganization Plan would look much different. HQ USACE twice disregarded the explicit instructions from Congress by recommending and attempting to implement specific geographic changes in the Corps' organizational structure. Congress, in passing the Energy and Water Appropriations Act for FY 90 and the Energy and Water Appropriations Act for FY 91, directed "the Chief of Engineers to initiate a conceptual study of potential Corps of Engineers field organization structures. The conferees emphasize that this study is to be conceptional in nature only, and shall not recommend specific geographic changes to the existing organization nor shall the Corps make any such changes during fiscal year 1990. Any proposals made for change in the Corps organizational structure shall be submitted to the appropriate Committees of Congress for review." 1/ (Emphasis added). This was followed by the House Report that accompanied The Energy and Water Appropriations Act for 1993, which stated:

> "The committee is aware of the need to reduce the overhead cost of the Corps of Engineers. The Assistant Secretary of the Army for Civil Works can assist in this reduction of cost by providing a management structure that reduces the flow of paperwork to higher headquarters. Additionally, the district commanders ought to be afforded the opportunity to manage their efforts and not be micromanaged from the top."

Clearly, Congress intended for the Corps to implement changes in its **management structure** that would achieve two specific goals; reduce overhead by compressing the organizational structure to reduce upward reporting and review procedures, and afford district commanders the opportunity to manage their efforts and not be micromanaged from the top.

Alternate Reorganization Plan:

In developing our recommendations for reorganization of the Corps, we remain cognizant of the directions Congress provided.

* The Fiscal Year 1992 Defense Authorizing Act, "made it clear that Congress intended, in enacting the Defense Base Closure and Realignment Act, to exclude from the Act's coverage those facilities used primarily for civil works, rivers and harbors projects, flood control, or other projects not under the primary jurisdiction of the Department of Defense. This aspect of the recommended legislation has retroactive effect, ensuring that the Corps of Engineers civil works activities on the Commission's 1991 list are not subject to closure or realignment under the Act." (Quote from Senate Armed Services Committee Report that accompanied the Act.)

Corps Reorganization Efforts:

The April 1991 Reorganization Study prepared in response to BRAC, listed six conceptual alternatives: status quo; realignment; regionalization; decentralization; elimination of divisions; and a combination of realignment and regionalization. Each concept was then evaluated under the BRAC criteria of mission essentiality, mission suitability, operational efficiency, expandability, and quality of life. The BRAC Reorganization Study proposed to implement a specific reorganization plan. That plan would have eliminated some division offices and reduced and eliminated some district offices. The plan was projected to achieve greater efficiency and effectiveness, yet the plan increased the ratio of management-to-employees, underestimated its implementation cost and overstated its savings and was unquestionably rejected by Congress.

Following the numerous legislative actions in the fall of 1991 and the removal of the Corps' Reorganization Study from the BRAC process, Headquarters (HQ) USACE established two groups to address reorganization. The division Task Force under Lt. Gen. Genetti, and the Field Advisory Committee under Mr. Don Cluff were to provide HQ USACE with guidance and criteria for reorganizing.

In the fall of 1992, Congress, through the Fiscal Year 1993 Energy and Water Appropriations Act, directed the Corps to look at its management structure in order to reduce its overhead. On 19 November 1992, the second Corps Reorganization Plan was announced by Lt. Gen. Williams, Chief of Engineers. This Plan looked at the Corps' roles, missions, workload, workforce, funding, and cost efficiency. The Plan evaluated three organizational concepts: Headquarters 1 (HQ1), Headquarters 3 (HQ3), and Eliminate Division Offices (EDO). Each concept was evaluated using the criteria of cost efficiency, flexibility enhancing, competence maintaining, and management effectiveness. Each objective was given equal weight, with a possible total score of 1.0 for all three concepts. The concepts ranked as follows:

Concept Ranking

Concept	Order of Merit	Difference
HQ3	.372	.005
EDO	.367	.105
HQ1	.262	
Total	1.001	

(For a detailed description of each of these concepts, see the U.S. Army Corps of Engineers REORGANIZATION PLAN and the Report of the Division and District Organization Task Force)

We considered the studies performed by the Corps to utilize their efforts to the extent possible. In developing our recommendations we learned that almost 30 days before the Corps announced its second Reorganization Plan the Engineer Inspector General (EIG) office produced a report on the Corps' cost of doing business 2/ which identified the EIG's findings and recommendations on improving the effectiveness and efficiency of the Corps.

It is our understanding that the findings and recommendations of the EIG addressed many of the same concerns expressed by Congress:

* Reduction of high overhead activities mandated by regulations in support of HQ USACE reporting requirements,

* Streamlining or elimination of layers of non-productive staff and processes in civil works review and the Program Project Management System,

* Provide district commanders with the authority to make decisions that provide for an efficient process,

* Provide for a strong fiscal ethic,

* Reduce the civil works review process that now involves five review layers, and

* Review and/or eliminate billback 3/ procedures, used by HQ USACE and Divisions, that lack controls and allow almost unlimited diversion of project funds with little or no accountability and have resulted in approximately $200 million in billbacks since FY 86. 4/

The EIG's recommendations and findings could have significant impact on the Corps' operation, but to our knowledge, the report was not utilized in the evaluation of the three concepts identified in the Reorganization Plan nor in the selection process use by HQ USACE.

Based on the directions of Congress, our understanding of the EIG's Report, and our analysis of the Corps reorganization studies, the Council developed the following outline of recommendations:

I. Compress the Corps Organizational Structure

  A. Reduce supervisor-to-employee ratio (Goal: 1 to 8)

  B. Eliminate layering of management

  C. Eliminate redundant and unnecessary upward reporting (As of June 1991 over 440 annual reports were required)

  D. Streamline review procedures (Currently civil works project require 5 review layers)

II. Eliminate Billback to Projects from HQ USACE and Divisions

  A. Provide separate appropriations bill for GE funds

  B. Provide for true accountability for expenditures of funds, using existing accounting systems

III. Stop Micromanaging From Top Down

  A. Chief of Engineers

    1. Accountable for GE funds
    2. Provides policy review
    3. Holds district commanders accountable
    4. Accountable to Congress for Corps activities

  B. District Commanders

    1. Accountable for district budgets
    2. Manage district staff within budget
    3. Accountable for technical review of district projects
    4. Implement true employee empowerment (TQM)

Next we reviewed the Corps existing and possible future workload. Rather than review each division or district's workload, we reviewed the distribution of existing and future work on a national basis. We considered Department of Defense Contracts (Figure No. 1), Federal Spending for Defense Programs (Figure No. 2), Hazardous Waste Site on the National Priority List (Figure No. 3), and the Distribution of Federal Funds for both defense and non-defense (Figure No. 4). Next, we compared the location of the Corps' first-line employees with Distribution of Federal Funds (Figure No. 5) and Federal Spending for Defense Programs (Figure No. 6).

Overall, the Corps' District employees are well located in relation to existing and future work. This is in agreement with the Assistant Secretary of the Army for Civil Works' definition of districts as "the Corps' face to the Nation." Maintaining this front-line service is imperative when we look at the work throughout the Nation. Additionally, it will enhance our partnering initiatives and service to our current and future customers.

Recommendation:

If carried out, the Congressional direction that accompanied the Energy and Water Appropriation Act for Fiscal Year 1993 would achieve an effective and efficient organizational structure. Additionally, we noted that one organizational concept in the Corps' 19 November 1992 Reorganization Plan, the Elimination of Division Offices, could achieve most if not all the objectives stated by Congress and those identified by the Council. The report of the Division Task Force also analysised the concept of eliminating all division offices. In that analysis the Task Force listed the impact of that concept on the functions currently performed by division offices. That analysis recommended that some division functions be shifted to HQ USACE and others be transferred to the district level. In general we support the Task Force's recommendations; however, we recommend that to the maximum extent possible the functions shifted to districts be done as a transfer of function without an increase in district staff. This would require that districts restructure current and future vacant positions to accommodate these new functions. It should be noted that in some situations this may necessitate a limited reduction in force action. In those situations these actions should be accomplished to the extent possible through normal attrition. Division laboratories should remain in their current location and come under the district command where they are geographically located.

Indeed the elimination of division offices, if implemented with the above stated objectives well defined by Congressional action, would provide for the maximum saving with minimal cost. (See Appendix B for Cost/Savings Analysis). Clearly, the elimination of division office was rated very high by HQ USACE, just five one thousandths (.005) of a point below USACE's adopted concept.

Our analysis indicates that the elimination of division offices would save the Federal Government over $121 million annually after the first 8 months. Moreover our recommended reorganization would be accomplished without disruption of service to the Corps' customers or the Nation. Additionally, elimination of division offices would impact only 2,139 employees as compared to 7,600 employees under HQ USACE's adopted plan.

1/ See House of Representatives Conference Report 101-235, at page 16, and House of Representatives Conference Report 101-889, at page 13.

2/ Report of the Engineer Inspector General on USACE Management of the Cost of Doing Business, approved by Lt. Gen. Arthur E. Williams, Chief of Engineers on 26 Oct. 1992.

3/ Billback is methodology whereby HQ USACE or Division Offices request reimbursement from District Offices to pay for certain HQ USACE and Division activities. General these funds are diverted from projects

4/ A 1979 General Accounting Office (GAO) report cautioned the Corps against diverting funds from projects to support HQ USACE and Division activities that should be funded by General Expense (GE) appropriations.

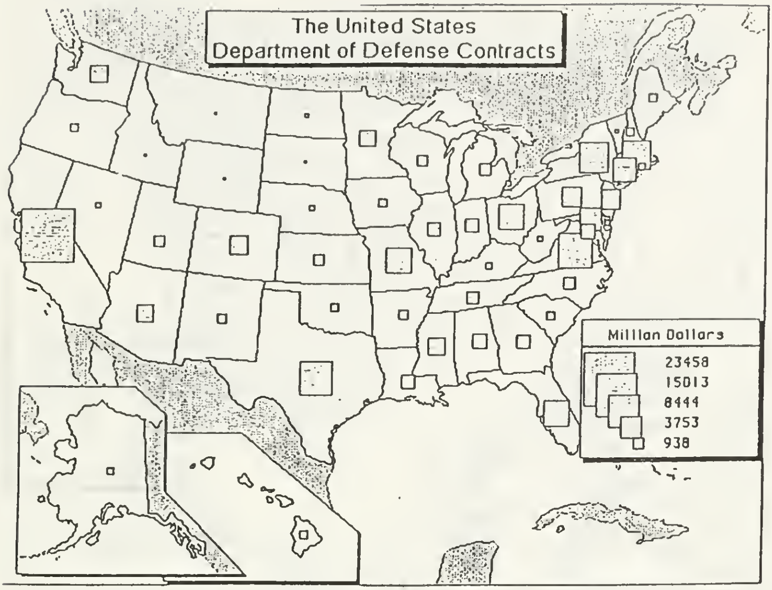


FIGURE #1

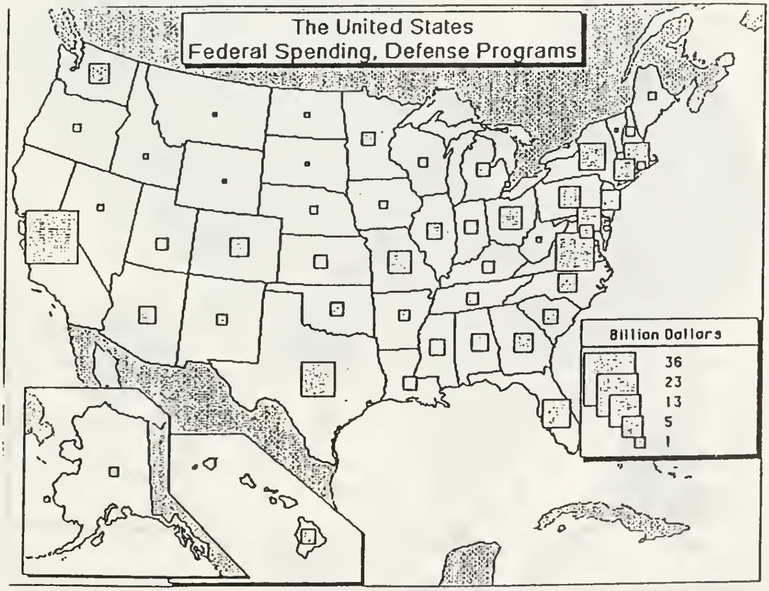


FIGURE #2

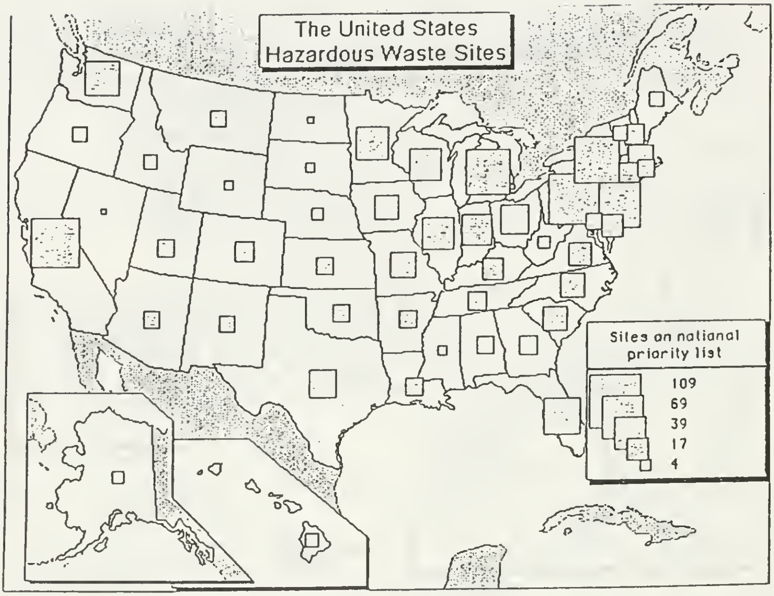


FIGURE #3

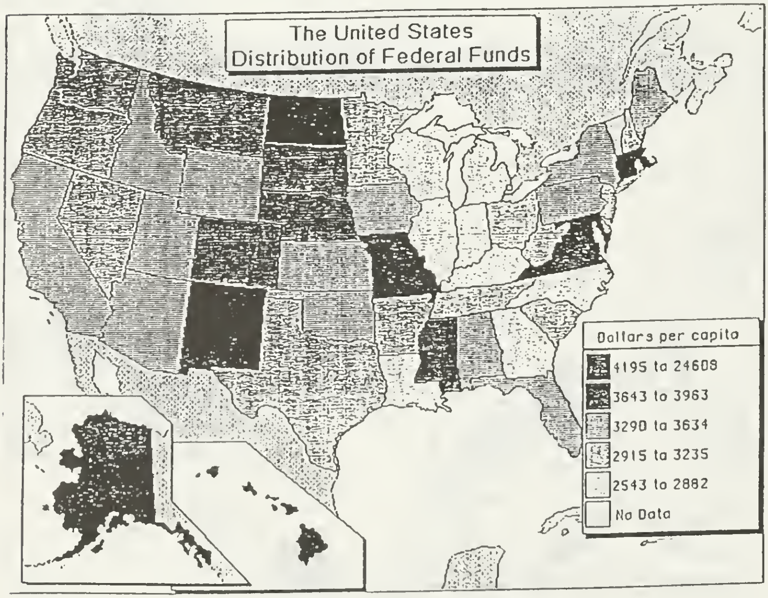


FIGURE #4

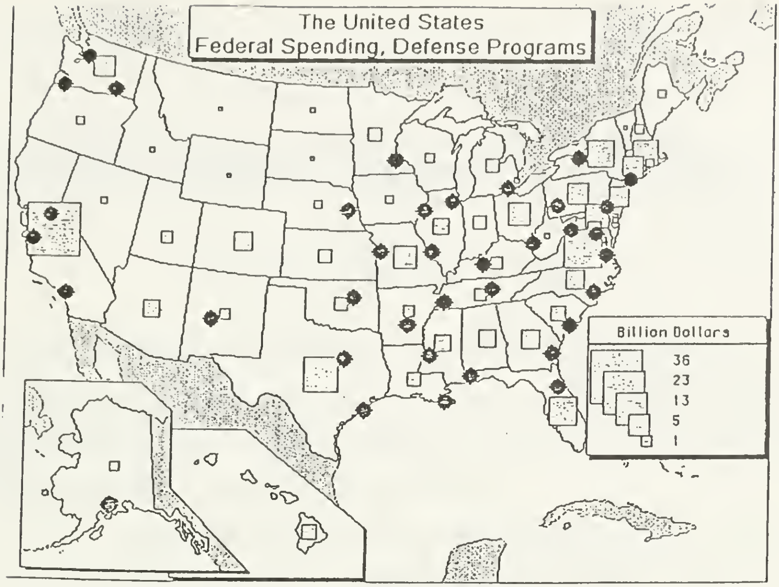


FIGURE #5

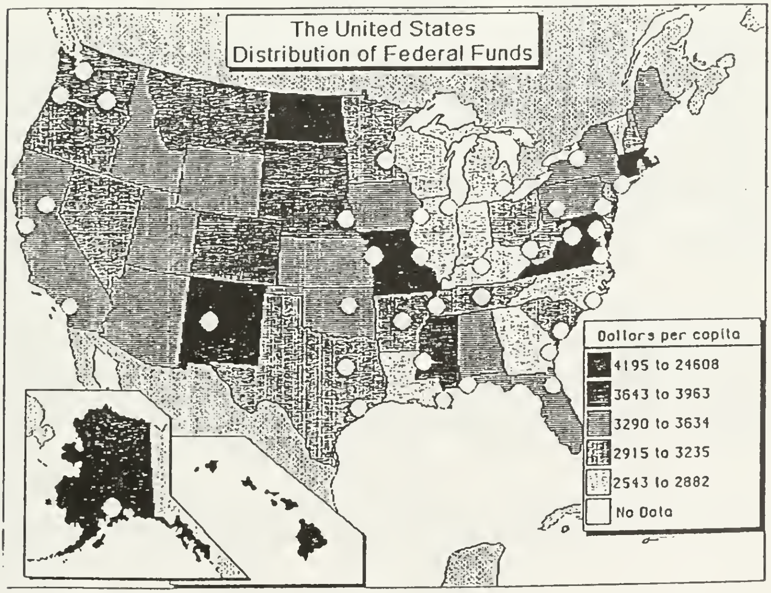


FIGURE #6

SUBCOMMITTEE RECESS

Senator JOHNSTON. The subcommittee will stand in recess until 2 p.m. tomorrow.

[Whereupon, at 3:34 p.m., Tuesday, March 30, the subcommittee was recessed, to reconvene at 2 p.m., Wednesday, March 31.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1994

WEDNESDAY, MARCH 31, 1993

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:07 p.m., in room SD–192, Dirksen Senate Office Building, Hon. J. Bennett Johnston (chairman) presiding.

Present: Senators Johnston and McConnell.

NONDEPARTMENTAL WITNESSES

KENTUCKY WATER RESOURCE PROJECTS

OPENING REMARKS

Senator JOHNSTON. The subcommittee will come to order. We are pleased to welcome our distinguished colleague from Kentucky, Mitch McConnell here, who is a new member of the Committee on Appropriations.

Mitch, we are glad to have you, not only on the subcommittee, but also on the Appropriations Committee. And we are glad to hear what you have to say.

Senator MCCONNELL. Thank you, Mr. Chairman. I was just about to dart out of the room, thinking that you might still be on the floor. I gather we will have a vote shortly.

I appreciate the opportunity to come before the committee for the first time as a member of this subcommittee to just mention a couple of projects of importance to my State. Obviously, time does not permit either of us to mention all the projects which deserve attention, so I will just highlight several which illustrate the types of problems experienced in different parts of the Commonwealth of Kentucky.

I have selected three projects to discuss, because they are representative of the entire State and offer perspective on Kentucky's diversity.

BUCKHORN LAKE, KY

The first project is Buckhorn Lake, located in Perry and Leslie Counties in eastern Kentucky. In 1961, the Army Corps of Engineers completed a dam, creating Buckhorn Lake. Since the completion of the dam, portions of nearby Highway 257 have been subject to increasingly frequent flooding. The problem is most severe in the spring, when hundreds of residents in the area are often isolated for long periods of time. Local authorities contend the flooding is due to a flaw in the original design of the lake and that the Army Corps of Engineers should elevate Highway 257 above the flood level.

Last year, at my request, the Corps updated their proposal to correct the problem. It is my understanding that the Corps is agreeable to acting on that proposal and needs roughly $2 million in funding and congressional direction. I certainly hope that the subcommittee will provide this funding.

HICKMAN, KY, BANK EROSION

The second project I would just touch on, Mr. Chairman, involves the city of Hickman, located on the east bank of the Mississippi River in west Kentucky. Hickman sits atop a high bluff overlooking the river. The bluff on which the city sits is rapidly eroding, threatening the entire town. Many families have already been forced to leave their homes.

At my request, the Army Corps of Engineers completed a study in the fall of 1992 which found that if the bluff erosion is not halted in the near future, it is liable to worsen and the city will lose its fire department, police department, school board, library, health department buildings, and water tanks.

Literally, Mr. Chairman, these buildings are clinging to the edge of this bluff, being threatened by the erosion.

The study indicates that there is a feasible solution. That solution calls for constructing an earthen embankment at an angle from the top of the bluff down to the delta below. The embankment will have a piping system to relieve water pressure.

This project has an estimated cost of $2.6 million. That compares with a $3.3 million cost estimate for relocating the families and buildings currently threatened by the erosion. So obviously, from a cost/benefit point of view, it makes sense.

Given the immediacy and severity of the situation facing Hickman, I strongly urge the committee to provide full funding for the project this year.

FRANKFORT, SOUTH FRANKFORT, KY, LOCAL PROTECTION PROJECT

The third and final project I want to mention involves the city of Frankfort, which is the capital of Kentucky. The Kentucky River flows through the middle of downtown Frankfort. The city's business district is located on one side of the river; the State Capitol and government offices are on the other. The city has historically been plagued by flooding problems that have disrupted residents and businesses as well as the operation of Kentucky State government.

Way back in 1938, Congress recognized this problem and authorized the construction of a floodwall to protect Frankfort. However, to date, only one of the three sections of the wall have been completed.

The city of Frankfort and the Army Corps of Engineers have a plan for completing the floodwall and last year the subcommittee approved $500,000 for preconstruction engineering and design.

Total funding necessary to complete actual construction of this project is $11.5 million. This year the city will need between $1.5 and $2 million to begin construction.

It is my understanding that the President intends to include funding for this project in his budget. I urge the committee to also include funding in its appropriation bills.

In addition to these three important projects, I intend to support in the Senate the efforts of my colleague, Congressman Rogers, to obtain funding for flood control projects in nine counties in eastern Kentucky. Many parts of eastern Kentucky are plagued by frequent and often severe flooding. This flooding is harmful to the health and welfare of the families living in the affected counties, to say nothing of the economic devastation it causes to the region as a whole.

Full funding of the flood control projects identified by Congressman Rogers will serve to vastly improve the quality of life of the families and the economy in the area.

ARC FUNDING

Let me also state here, my unequivocal support for full funding of the Appalachian Regional Commission [ARC]. In its 28-year history the ARC has vastly improved the quality of life in the eastern part of my State by providing vital services in the area of transportation, housing, health care, and education. The ARC touches the lives of thousands of eastern Kentuckians every day. This very important Commission deserves the full support of this committee.

Mr. Chairman, I appreciate the opportunity to come before you today and to outline my concerns about three of these projects. And I thank you very much for your time.

Senator JOHNSTON. Thank you, Mitch. We are glad to have you here before the committee, and I know we will have your support in the committee as we try to help these good Kentucky projects.

[The statement follows:]

STATEMENT OF SENATOR MCCONNELL

Mr. Chairman, I appreciate the opportunity to discuss before the Committee some projects which are of particular importance to Kentucky. Time does not permit me to mention all the projects in my state which deserve the attention of this Committee, so this afternoon I will highlight several projects which illustrate the types of problems experienced in different parts of Kentucky. I have selected three projects to discuss because they are representative of the entire state and offer perspective on Kentucky's diversity.

BUCKHORN LAKE

The first project I will discuss is Buckhorn Lake, located in Perry and Leslie Counties in Eastern Kentucky. In 1961, the Army Corps of Engineers completed a dam creating Buckhorn Lake. Since the completion of the dam, portions of nearby Highway 257 have been subject to increasingly frequent flooding. The problem is most severe in the spring, when hundreds of residents in the area are often isolated for long periods of time. Local authorities contend the flooding is due to a flaw in the original design of the lake, and that the Army Corps of Engineers should elevate Highway 257 above the flood level. Last year, at my request, the Corps updated their proposal to correct the problem. It is my understanding that the Corps is agreeable to acting on that proposal, and needs roughly 2 million dollars in funding and congressional direction. I urge the Committee to provide this funding.

HICKMAN

The second project of note involves the City of Hickman, located on the east bank of the Mississippi River in Western Kentucky. Hickman sits atop a high bluff overlooking the river. The bluff on which the city sits is rapidly eroding, threatening the entire town. Many families have already been forced to leave their homes.

At my request, the Army Corps of Engineers completed a study in the fall of 1992 which found that if the bluff erosion is not halted in the near future, the slide will worsen and the city will lose its fire department, police department, school board, library, health department buildings, as well as the city's water tanks.

The study also indicated that there is a feasible solution. That solution calls for constructing an earthen embankment at an angle from the top of the bluff to the delta below. The embankment will have a piping system to relieve water pressure.

This project has been estimated at 2.6 million dollars. That compares with a 3.3 million dollar cost estimate for relocating the families and buildings currently threatened by the erosion.

Given the immediacy and severity of the situation facing Hickman, I strongly urge the Committee to provide full funding for this project this year.

FRANKFORT FLOODWALL

The third project involves the City of Frankfort, the capital of Kentucky. The Kentucky River flows through the middle of downtown Frankfort. The city's business district is located on one side of the river; the state capitol and government offices are on the other. The city has historically been plagued by flooding problems that have disrupted residents and businesses as well as the operation of Kentucky state government.

In 1938, Congress recognized this problem and authorized the construction of a floodwall project to protect Frankfort. However, to this date, only one of the three sections of the wall has been completed.

The City of Frankfort and the Army Corps of Engineers have a plan for completing the floodwall, and last year the Subcommittee approved five hundred thousand dollars for pre-engineering and design.

Total funding necessary to complete actual construction of this project is 11.5 million dollars. This year, the city will need between 1.5 and 2 million dollars to begin construction. It is my understanding that the President intends to include funding for this project in his budget. I urge the committee to also include funding in its appropriations bill.

MISCELLANEOUS PROJECTS

In addition to these three important projects, I intend to support in the Senate the efforts of my colleague Congressman Hal Rogers to obtain funding for flood control projects in nine counties in Eastern Kentucky.

Many parts of Eastern Kentucky are plagued by frequent and often severe flooding. This flooding is harmful to the health and welfare of the families living in the affected counties, to say nothing of the economic devastation it causes to the region as a whole. Full funding of the flood control projects identified by Congressman Rogers will serve to vastly improve the quality of life of the families and the economy in the area.

Let me also state here my unequivocal support for full funding of the Appalachian Regional Commission. In its 28-year history, the ARC has vastly improved the quality of life, in the eastern part of my state. By providing vital services in the area of transportation, housing, health care and education, the ARC touches the lives of thousands of eastern Kentuckians every day. This very important Commission deserves the full support of this Committee, and I intend to work with my colleagues to ensure it is fully funded.

Senator JOHNSTON. Our next witness is the Maritime Advisory Council of New Jersey, Mr. Joseph T. Grossi. We are going to try to stick to this schedule and we are a little bit behind now. But Mr. Grossi is recognized for 5 minutes.

NEW JERSEY AND TRI-STATE REGION WATER PROJECTS

STATEMENT OF JOSEPH T. GROSSI, EXECUTIVE DIRECTOR, MARITIME ADVISORY COUNCIL OF NEW JERSEY

Mr. GROSSI. Good afternoon, Mr. Chairman, members of the committee. It is a pleasure to appear before you today on appropriations of great importance to New Jersey and our residents. I am here today representing the State of New Jersey; the State's department of commerce and economic development; and the State's department of environmental protection and energy. We have based our testimony upon last year's appropriations and current project schedules.

An issue that we would like to speak very briefly about and is of concern to New Jersey is the proposed U.S. Army Corps of Engineers reorganization plan. And, as presented, this plan could have a serious negative impact on New Jersey and our region. We urge that you oppose the implementation of this reorganization plan and any appropriation necessary to implement this change prior to congressional oversight and adequate discussion of its merits and flaws with those who it will impact.

The following project summary and the appended project description booklet will provide you with a clear understanding of New Jersey's unique needs. We ask that you carefully consider our request for funding of these projects in fiscal year 1994. We would also ask that, as I have 36 projects in my written testimony, that it would be impossible to cover them in the 5 minutes allotted. I would ask that the written statement be included as part of the official record.

Senator JOHNSTON. Thank you very much, Mr. Grossi. We certainly will do that, and we are familiar with those projects, having worked hard on those over a period of many years.

And Senator Lautenberg, who is a member of the full committee, makes us—if we forgot it for one moment, he would make us well aware of it, so we look forward to taking care of New Jersey's needs very well, as we have in the past.

Mr. GROSSI. All right. Thank you, sir.

[The statement follows:]

STATEMENT OF JOSEPH T. GROSSI

ENDORSED BY

Bridgeton Municipal Port Authority (NJ)
Delaware River and Bay Authority (DE, NJ, PA)
Delaware River Port Authority (NJ, PA)
Green Brook Flood Control Commission (NJ)
Hudson County Chamber of Commerce (NJ)
International Union of Operating Engineers—Local 25
Joint Executive Committee for The Improvement of the Delaware (PA)
Maritime Association of the Port of New York/New Jersey
Marine Trades Association of New Jersey National Dredging Association, New Jersey Chapter
New Jersey Alliance for Action
New Jersey Marine Sciences Consortium
New Jersey State Chamber of Commerce
New Jersey State Commission of Pilotage
New York-New Jersey Port Promotion Association
PENJERDEL Council (PA, NJ, DE)
Perth Amboy Waterfront Committee (NJ)

Ports of Philadelphia Maritime Exchange (PA)
Pilot's Association for the Bay and River Delaware (DE, NJ, PA)
Port Authority of New York and New Jersey
Project T.R.A.D.E. (Take a Responsible Approach To Dredging and the Environment) (NJ)
Salem Municipal Port Authority (NJ)
Save Our Port Coalition (NY, NJ)
South Jersey Port Corporation (NJ)
Towboat and Harbor Carriers Conference, AWO (American Waterways Organizations)
United New Jersey Sandy Hook Pilots Benevolent Association
United New York Sandy Hook Pilots Benevolent Association

Mr. Chairman and Members of the Committee, it is a pleasure to appear before you today on appropriations of great importance to New Jersey and our residents. I am Joseph T. Grossi, Executive Director of the New Jersey Department of Commerce and Economic Development's Maritime Advisory Council. Accompanying me today is Bernard J. Moore, Administrator, Division of Engineering and Construction, of the State Department of Environmental Protection and Energy. We are here today in Washington to express our appreciation for past year appropriations and to outline our recommendations for fiscal year 1994 funding of civil works projects of importance to New Jersey.

As the President's fiscal year 1994 proposed Budget had not as yet been released when this testimony was prepared, our requests are based upon last year's appropriations and current project schedules. Unfortunately, using the information available, we were not able to develop testimony relevant to Operations and Maintenance projects. In past years sufficient funding has been provided to continue the operation and maintenance of constructed projects. However, we would like to reserve the opportunity to comment on those O&M projects that may require work but are not included in the President's FY '94 Budget when it is released.

Another issue of concern is the proposed U.S. Army Corps of Engineers Reorganization Plan. As presented, this plan could have a serious negative impact on New Jersey and our region. We urge that you oppose the implementation of this proposed reorganization plan, and any appropriation necessary to implement this change, prior to Congressional oversight and adequate discussion of its merits and flaws with those who will be impacted.

The following projects summary, and the appended project description booklet, will provide you with a clearer understanding of our State's unique needs. We ask that you carefully consider our requests for funding of these projects in FY '94.

NAVIGATION

Arthur Kill Channel Extension to Carteret, NY and NJ (Study).—The existing 35 ft. deep federal channel cannot accommodate today's modern deep-draft vessels. Six bulk facilities annually handle in excess of 15 million tons of petroleum petrochemicals, chemicals, sulphur, and cement. We support an FY '94 Budget appropriation of $400,000 to fund the combined feasibility/preconstruction engineering and design phase of this study. The State of NJ supports this project and is participating with the Port Authority of NY and NJ and the Corps of Engineers in developing the FCSA necessary to advance this project.

NY Harbor and Adjacent Channels, Claremont Channel, NJ (PE&D).—Claremont Channel is a non-federal channel with an average depth of 27 ft. While authorized for construction to a depth of 42 ft., the modified project will provide adequate shipping economies with a 34 ft. deep channel. For the past ten years, scrap metal exports have averaged more than 600,000 long tons per year, and crushed stone transshipments for the past six years have totalled nearly 4 million tons annually. We wish to request that $500,000 be appropriated in FY '94 to continue the preconstruction engineering and design phase. The State of NJ supports this project and has expressed an intent to fund the non-federal share at construction.

NY Harbor and Adjacent Channels, Port Jersey Channel, NJ (Construction).—The Port Jersey Channel serves 13 shipping lines at the Global Marine Container Terminal. In 1991, this facility handled 300 ship and 104 barge arrivals. As a privately-owned terminal, Global pays nearly $4 million in federal, State, and local taxes annually. This channel also provides access for the U.S. Army Military Ocean Terminal and the Port Authority of NY and NJ Auto Marine Terminal. We respectfully request that $3 million be appropriated in FY '94 to advance a construction start for this much needed channel improvement. The State of NJ supports this project and is participating with the Port Authority of NY and NJ and the Corps of Engineers in establishing the Local Cooperating Agreement for this project.

With regard to the above three projects, the Port Authority of NY and NJ and the State of New Jersey are developing an agreement for the Port Authority to act on behalf of the State on a number of commercial navigation projects. It has come to our attention that the Corps may not have included funding in its budget request for FY '94 due to its belief that this agreement has not been finalized. We want to assure you that this agreement will be concluded shortly and that funding for the Arthur Kill Extension to Carteret feasibility study, Claremont Channel, and the Port Jersey Channel construction should be included in FY '94.

Arthur Kill Channel, Rowland Hook Marine Terminal, NY and NJ (PE&D).—This project includes deepening the existing 35 ft. channel to 41 ft. from its confluence with the Kill Van Hull Channel to the Howland Hook Marine Terminal, and to 40 ft. from Howland Hook to Bayway and Petroport. We wish to support a request by the Port Authority of NY and NJ for an appropriation of $500,000 to resume the PE&D phase to evaluate this project's alignment. The Port Authority requires this study to accommodate the deep-draft tenant at this terminal.

Delaware River Comprehensive Navigation Study, NJ, PA and DE (Study).—The existing Delaware River Navigation System includes six deep-draft navigation projects. We wish to express our support for an FY '94 Budget appropriation of $200,000 and any additional environmental study costs needed to complete this feasibility study.

Delaware River Main Channel, NJ, PA and DE (PE&D).—The project extends over 100 miles from deep water in the Delaware Bay to the Ports of Philadelphia, PA and Camden, NJ. We wish to express our support for an FY '94 Budget appropriation of $4 million to continue this PE&D effort. Work remaining consists of finalizing the main channel deepening report, which includes environmental issues and technical studies.

Delaware River, Philadelphia to the Sea, NJ, PA, and DE (O&M).—We wish to express our support for a FY '94 Budget appropriation of $13,000,000 for the continued operations and maintenance of this important tri-state navigation channel project. This request is based upon previous year funding levels necessary to maintain this channel depth.

Kill Van Hull and Newark Bay Channels, NY and NJ (Construction).—With deepening of this channel from 35 ft. to 40 ft. more than half complete, the corps is now continuing a critical phase of rock removal through blasting. Work towards completion of this project is important to the competitive position of the port and we, therefore, request that $28,500,000 be appropriated for this project in FY '94 to continue the accelerated rock removal contract and provide a 40 ft. channel depth.

Middle Thorofare Harbor, NJ (Construction).—Located in Cape May County, this thorofare is a major landing for commercial fishing fleets in the South Jersey area. The project sponsor wishes to support an FY '94 appropriation of $325,000 to begin construction under the authorization of Section 107 of the Rivers and Harbor Act of 1960.

NY Harbor and Adjacent Channels, Red Hook Flats Anchorage, NY (Study).—This anchorage was designed in the early 1960's for vessels averaging 525 ft. in length. Today's modern ships are twice as long, with drafts of 40 ft. We wish to express our support for an FY '94 Budget appropriation of $200,000 to initiate the feasibility study phase for the deepening of the Red Hook Flats. This project is necessary to provide safe navigation and maintain our bi-state port's productivity by being able to accommodate today's larger class of vessels.

NY Harbor and Adjacent Channels, Raritan Bay Anchorage Areas, NY and NJ (Study).—This project includes two separate anchorage areas for navigation improvements: Perth Amboy and Sandy Hook. Sandy Hook anchorage, which was never constructed, is due west of the tip of Sandy Hook peninsula at the entrance to the main ship channel. Fiscal year 1993 funds are being used to initiate the reconnaissance phase of this study. We wish to support an FY '94 Budget appropriation of $200,000 to complete the reconnaissance phase and initiate this project's feasibility study.

NY Harbor Collection and Removal of Drift Project, NY and NJ (Construction).—This project is aimed at the removal of approximately 2,230 sunken hulks and 149 decaying shore structures that are the source of dangerous, unsightly and costly harbor drift which fouls our beaches and damages nearly 18,000 commercial, public, and recreational vessels each year. We wish to request that $3,900,000 be appropriated for this project in FY '94. These funds will be used to complete construction of the NY Brooklyn 2A Reach and the NJ Weehawken-Edgewater 2A Reach, as well as planning engineering and design works at these Reaches.

Salem River, NJ (Construction).—This navigation channel improvement project will deepen the existing 12 ft. channel to a depth of 18 ft. to safely accommodate larger vessels and provide greater shipping economies. The State of NJ supports this project, the Feasibility Study findings, and has expressed an intent to provide the non-federal share at construction. We wish to express our support of an FY '94 Budget appropriation of $5 million to initiate construction.

Shoal Harbor and Compton Creek, Belford, NJ (Construction).—This improvement consists of deepening the existing channel and widening to allow for additional vessel berthing areas for the Belford Fishing Cooperative. The State Department of Environmental Protection and Energy is the local sponsor and has indicated their desire that the project be expanded to accommodate a proposed commuter ferry terminal. We wish to support an FY '94 appropriation of $2,400,000 to commence the construction of this improvement as authorized by Section 107 of the Rivers and Harbors Act of 1960.

W.R.D.A of 1992, Section 326, NY Bight Hydro-Environmental Study (Study).—This project extends all particulars of the New York Bight model previously addressed under Section 728 of W.R.D.A of 1986, to the complex NY Harbor Environs. It will also add features to the Bight model itself to insure complete comprehensive modeling for all engineering, physical, and environmental purposes. It is estimated that $3 million per year for two years will complete the model in FY '95. Therefore, we support a $3 million FY '94 appropriation and will seek language modifications to authorize this increase.

W.R.D.A. of 1992, Sec. 405, Sediments Decontamination Technologies (study).—Decontamination technologies identified under Section 412 of the W.R.D.A of 1990 authorized the Environmental Protection Agency and the Secretary of the Army to jointly select removal, pre-treatment, and decontamination technologies of contaminated sediments for a decontamination project. We wish to support an FY '94 appropriation of $5 million for this important decontamination effort.

Will's Hole Thorofare, NJ (Construction).—Located along the Atlantic coast of New Jersey inside the Manasquan Inlet, this channel is heavily used by the commercial fishing industry. We wish to express support for an FY '94 appropriation of $225,000 for the construction of this project as authorized by Section 107 of the Rivers and Harbors Act of 1960.

FLOOD CONTROL

Hackensack River Basin, NJ (Study).—In 1990, a study was authorized under the Corps' Support For Others (SFO) program to investigate localized areas of flooding and to determine if an economically feasible plan could be identified. In FY '93, a Congressional add of $100,000 was appropriated to revise the SFO report into a reconnaissance level report. fiscal year 1994 funds in the amount of $400,000 are being requested to initiate this cost-shared feasibility study.

Lower Saddle River, NJ (PE&D).—Major flooding of the Saddle River affects over 2,500 recreational, commercial, and industrial establishments. These project improvements would provide protection against a major flood and would eliminate over $6 million of annual flood damage. We wish to express support for an FY '94 appropriation of $1.3 million to continue the PE&D effort.

Manasquan River Basin, NJ (Study).—Local interests desire a study to determine the advisability of providing improvements in the interest of flood control and other allied purposes with due concern for the environmental values of the Manasquan Basin. We wish to support an FY '94 Budget appropriation of $150,000 to fund the reconnaissance phase of this project.

Molly Ann's Brook, NJ (Construction).—Major flooding in recent years has adversely affected about 520 residential, commercial, and industrial establishments in the 100-year flood plain. This project is authorized for construction under W.R.D.A of 1986. We wish to support an FY '94 Budget appropriation of $1 million to continue the construction phase of this project.

Passaic River Mainstem, NJ (PE&D).—Flooding is a particularly serious problem in the Passaic River Basin, an area which encompasses 935 sq. miles. Substantial progress has been made in the study phase of this project. As you know, Congress authorized a revised version of the project which the Governor's Office has asked the State's Department of Environmental Protection and Energy to examine carefully. Their review will include an evaluation of both the environmental and fiscal impact of the tunnel project on our State. Funding for this project in FY '94 will allow the Corps to continue the engineering and design phase. This data, together with the State's own findings, will enable NJ to develop a credible, sensible, and cost-effective flood control policy.

Pine Brook Manalapan Township, NJ (PE&D).—This planning and engineering effort addresses the need for flood control improvements in the Pine Brook Basin. This project funding had been deferred but can now be used to initiate the PE&D

portion of the study. We wish to support an FY '94 appropriation of $100,000 to initiate this phase of the project for which the State of NJ is prepared to cost-share.

Poplar Brook, NJ (Study).—This study will determine the need for flood control projects along Poplar Brook, which has a drainage area of four square miles. Fiscal year 1994 funds are needed to initiate the reconnaissance study phase, and we support an FY '94 appropriation of $350,000 to advance this project.

Raritan River Basin, Green Brook Sub-Basin, NJ (Construction).—The Green Brook Sub-Basin Study area drains approximately 65 sq. miles of urban, suburban, and industrialized area. In 1971, Hurricane Doria caused more than $22 million in damage, while another major storm in 1973 contributed to six deaths, residential evacuation, and over $25 million in damages. The Green Brook Flood Control Commission and the State of NJ have expressed a preference for the authorized plan, which would provide protection to the upper and lower basin communities. We believe that the Green Brook Flood Control project should be carried forward to achieve protection at the earliest possible date. This project is needed to prevent loss of life and property, and we wish to support an appropriation for this project in FY '94 of $3,500,000.

SHORE PROTECTION/BEACH EROSION

Barnegat Inlet to Little Egg Harbor, NJ (Study).—This study will review the existing beach erosion/flood control projects to determine modifications necessary to provide protection for adjacent communities. The State wishes to express support for an FY '94 Budget appropriation of $350,000 to begin a reconnaissance study of this area.

Brigantine Inlet to Great Egg Harbor, NJ (Study).—A study to investigate shore protection, flood control, and water quality problems attributed to natural and manmade conditions. FY '93 funds are being used to continue the feasibility portion of this study. New Jersey has signed an agreement to cost-share this study, and we support an FY '94 appropriation of $380,000 to continue this effort.

Cape May Point, NJ (Study).—A study is authorized by the Corps in the Lower Cape May Meadows area of the coastline. We believe it is important to expand this study to include the Borough of Cape May Point and support the current reconnaissance study and its inclusion of Cape May Point. We wish to request an FY '94 appropriation of $300,000 for this effort.

Delaware Bay Coastline, NJ and DE (Study).—The goal of this study is to provide information on the long-term shoreline changes which will serve as a basis for sound coastal planning. We wish to support an appropriation of $600,000 in FY '94 for this study.

Lower Cape May Meadows, NJ (Study).—We wish to support an FY '94 appropriation of $500,000 to fund this study to develop recommendations for the prevention of further water quality degradation and pollution. The adjacent Cape May Point should be included in this effort, as each is dependent upon the other and a combined study will save both federal and state dollars.

Raritan Bay and Sandy Hook Bay, NJ (Study).—This storm damage protection reconnaissance study is beneficial to coastal Bayshore communities not presently protected from storm damage including inundation, wave attack, and coastal erosion. We wish to support an FY '94 appropriation of $320,000 to continue the feasibility study phase.

Raritan Bay and Sandy Hook Bay, Cliffwood Beach, NJ (Construction).—The project for Cliffwood Beach was authorized for construction as part of the existing Raritan Bay and Sandy Hook Bay, NJ project in the Flood Control Act of October 1962. Tidal flooding and beach erosion progressively threaten the protective beaches and nearby residential areas. We wish to request that an FY '94 Budget appropriation of $700,000 be approved to allow the Corps of Engineers to continue the construction function of this project.

Raritan Bay and Sandy Hook Bay, Section 934 Study, NJ (Study).—Section 934 of the W.R.D.A. of 1986 grants the Corps of Engineers the authority to study completed Beach Nourishment projects to determine if additional improvements are required. We wish to request that an FY '94 Budget appropriation of $500,000 be approved to allow the Corps of Engineers to complete this study of the storm damage reduction benefits to the Bayshore region to be realized from renewed coastal beach nourishment projects.

Sandy Hook to Barnegat Inlet, NJ (Construction).—Erosion and storms have seriously reduced the width of most beaches in the study area with consequent exposure of the shore to storm damage. The State of New Jersey has stated its support for this project and we wish to express our support for an FY '94 Budget appropriation of $36 million to continue the construction phase of this project and advance commencement of construction at Asbury Park.

Townsend Inlet to Cafe May Inlet, NJ (Study).—This study will investigate shore protection/flood control and water quality problems. FY '93 funds were used to initiate the feasibility study phase and the funds supported in FY '94 will be used to continue this effort. We, therefore, wish to support an FY '94 Budget appropriation of $490,000 for this project. The State has signed the Feasibility Study Cost-Share Agreement.

PLANNING ASSISTANCE

Section 22, P.L. 93–251 Study, NJ (Study).—This project provides planning assistance to states to perform engineering evaluations of water resource problems. There are several planning projects for which we wish to request funds in FY '94 through this program. The funds requested for these proposed studies are $300,000 and the State of New Jersey is prepared to financially participate.

Mr. Chairman, we appreciate your past support and ask you to carefully consider the requests made for monies in FY '94. These requests have been made with a special eye toward the most efficient use of both federal and State funds. In closing, I wish to thank you for the opportunity to appear before this Subcommittee.

Summary of New Jersey Federal civil works appropriations—Fiscal year 1994

Project	*Project sponsor recommendation*
Navigation:	
Arthur Kill Channel, Howland Hook, NY and NJ (study)	$500,000
Arthur Kill extension to Carteret, NY and NJ (study)	400,000
Delaware River comprehensive navigation study, NJ, PA & DE (study)	200,000
Delaware River main channel, PA, NJ and DE (PE&D)	4,000,000
Kill Van Kull and Newark Bay channels, NY and NJ (construction)	28,500,000
Middle Thorofare Harbor, NJ (construction)	325,000
NY Harbor and adjacent channels, Claremont Channel, NJ (PE&D)	500,000
NY Harbor and adjacent channels, Port Jersey Channel, NJ (construction)	3,000,000
NY Harbor and adjacent channels, Raritan Bay anchorage, NY and NJ (study)	200,000
NY Harbor and adjacent channels, Red Hook Flats anchorage, NY and NJ (study)	200,000
NY Harbor collection and removal of drift, NY and NJ (construction)	3,900,000
Salem River, NJ (construction)	5,000,000
Shoal Harbor and Compton Creek, Belford, NJ (const.)	2,400,000
Water Resources Development Act of 1992:	
Section 326, NY Bight, hydro-environmental study	3,000,000
Section 405, demonstration project (study)	5,000,000
Will's Hole Thorofare, NJ (construction)	225,000
Category subtotal	57,350,000
Flood control:	
Hackensack River basin, NJ (study)	400,000
Lower Saddle River, NJ (PE&D)	1,300,000
Manasquan River basin, NJ (study)	150,000
Molly Ann's Brook, NJ (construction)	1,000,000
Passaic River main stem, NJ and NY (PE&D)	17,000,000
Pine Brook, Manalapan Township, NJ (PE&D)	100,000
Poplar Brook, NJ (study)	350,000
Raritan River basin, Green Brook subbasin, NJ (const.)	3,500,000
Category subtotal	23,800,000
Shore protection/beach erosion	
Barnegat Inlet to Little Egg Inlet, NJ (study)	350,000
Brigantine Inlet to Great Egg Harbor, NJ (study)	380,000
Cape May Point, NJ (study)	300,000
Delaware Bay coastline, DE and NJ (study)	600,000

Project	Project sponsor recommendation
Lower Cape May Meadows, NJ (study)	500,000
Raritan Bay and Sandy Hook Bay, NJ (study)	320,000
Raritan Bay and Sandy Hook Bay, Cliffwood Beach, NJ (construction)	700,000
Raritan Bay and Sandy Hook Bay, NJ, section 934 (study)	500,000
Sandy Hook to Barnegat Inlet, NJ (construction)	36,000,000
Townsend Inlet to Cape May Inlet, NJ (study)	490,000
Category subtotal	40,140,000
Planning assistance: Section 22, P.L. 93–251 (study)	300,000
Grand total	121,590,000

MARITIME ADVISORY COUNCIL OF NEW JERSEY

MARCH 31, 1993.

DEAR MEMBERS OF THE UNITED STATES CONGRESS:

New Jersey, a maritime state, relies heavily on waterfront and coastal commerce to maintain its healthy economy. New Jersey's waterways yield more than a quarter billion tons of cargo a year, producing more than $1 billion in customs revenue for the Federal Government.

In addition to our ports, our inland waterways and rivers are equally important for our commerce and recreation. However, one of the results of our growth is the increasing problem of flooding. Adequate water supply is another issue that we must also face.

The New Jersey Civil Works Appropriations Request for fiscal year 1994 addresses these issues. The Maritime Advisory Council of New Jersey supports these important projects and has given careful review to capital improvements in navigation, flood control, shore protection, and water supply efforts.

As the President's FY '94 Budget has not yet been released, our requests are based upon last year's appropriations and current project schedules. These requests and expressions of support, however, exclude the Operation and Maintenance category projects, as the information necessary to comment was not available.

We ask that you carefully consider our requests for funding in FY '94. New Jersey is moving ahead in a partnership responsibility with the Federal Government as outlined in the Water Resources Development Act of 1986. This summary will provide both the House and Senate Appropriations Committees with a clearer understanding about our state's unique needs.

Sincerely,

JOHN L. BUZZI,
Chairman, Maritime Advisory Council of New Jersey.

NAVIGATION

ARTHUR KILL CHANNEL, HOWLAND HOOK, NEW YORK AND NEW JERSEY (PRECONSTRUCTION ENGINEERING AND DESIGN)

Fiscal year 1994 project sponsor recommendation	$500,000

Project description

The project area is located along the Arthur Kill Channel from its confluence with the Kill Van Kull Channel southwesterly to the Bayway and Petroport facilities, in New Jersey and New York. This channel improvement will include deepening of the existing 35 ft. channel to 41 ft. from its confluence with the Kill Van Kull Channel to the Howland Hook Marine Terminal to the Bayway and Petroport facilities. Also included are selected widenings and realignments of the channel in the interest of navigational safety. This project was authorized by the Water Resources Development Act of 1986.

Project sponsor recommendation

We wish to support the request of the Port Authority of New York and New Jersey for an FY '94 appropriation of $500,000 to resume the planning, engineering and design phase to evaluate this project's channel alignment. This work is necessary to study subsurface conditions in light of the Kill Van Kull and Newark Bay Channels rock excavation experience.

The Port Authority has informed the New York District Army Corps of Engineers that a deep-draft tenant for the Howland Hook Marine Terminal was approved in

December 1992. The Port Authority has indicated their support for the resumption/completion of the preconstruction engineering and design phase at this time.

ARTHUR KILL EXTENSION TO CARTERET NEW JERSEY AND NEW YORK (STUDY)

Fiscal year 1994 project sponsor recommendation	$400,000

Project description

This study's focus in on the portion of the Arthur Kill from Howland Hook, New York south to Carteret, New Jersey. The 35 ft. deep existing federal project does not allow the full loading of liquid and dry bulk cargo ships destined for shoreside facilities. This situation requires that large ocean-going vessels either light load (not fully utilizing ship capacity at a substantial loss of economy), or perform expensive off-shore lightering operations in deeper waters outside this channel. Deeper channels would streamline operations and realize considerable transportation cost savings.

Six deep-draft bulk facilities along the Arthur Kill extension annually handle in excess of 15 million tons for cargo. Petroleum, petrochemicals, specialty chemicals, sulphur, and cement are carried to these terminals. Large modern vessels would immediately benefit from substantial savings and safer navigation if the existing channel were deeper.

Project sponsor recommendation

This project was conditionally authorized for construction in accordance with Section 202(b) of the Water Resources Development Act of 1986. The project authorization assumes construction of the Kill Van Kull, Newark Bay, and Arthur Kill Howland Hook projects to a depth of at least 40 ft. below MLW.

We support a fiscal year 1994 appropriation of $400,000 to fund the feasibility phase of this study. The State of New Jersey supports this study and is participating with the Port Authority of New York and New Jersey and the Corps of Engineers in developing the Feasibility Study Cost-Share Agreement (FCSA) necessary to advance this project. The State of New Jersey has expressed an intent to fund the non-federal share of the feasibility study phase.

DELAWARE RIVER COMPREHENSIVE NAVIGATION STUDY, NEW JERSEY, PENNSYLVANIA, AND DELAWARE (STUDY)

Fiscal year 1994 project sponsor recommendation	$200,000

Project description

The Delaware River Navigation System includes six deep-draft navigation projects serving the Ports of Philadelphia, Pennsylvania; Camden, New Jersey; Trenton, New Jersey; and Wilmington, Delaware. These ports collectively transport more than 114 million tons of cargo annually, support nearly 100,000 jobs, and provide a much needed economic stimulus to the entire region. This system also serves naval vessels at the Philadelphia Naval Base.

The representatives of port facilities utilizing the Delaware River cite the need for a 45 ft. deep channel and improved navigation movements. An average of nine million tons of cargo are lightered into barges due to the restrictive 40 ft. channel depths.

Project sponsor recommendation

We wish to express our support for an FY '94 appropriation of $200,000 and any additional environmental study costs needed to advance the feasibility phase of this project.

DELAWARE RIVER—MAIN CHANNEL, NEW JERSEY, PENNSYLVANIA, AND DELAWARE (PRECONSTRUCTION ENGINEERING AND DESIGN)

Fiscal year 1994 project sponsor recommendation	$4,000,000

Project description

The Delaware River Navigation System includes six deep-draft navigation projects serving the Ports of Philadelphia, Pennsylvania; Camden, New Jersey; Trenton, New Jersey; and Wilmington, Delaware. These ports collectively transport more than 114 million tons of cargo annually, support nearly 100,000 jobs, and provide a much needed economic stimulus to the entire region. This system also serves naval vessels at the Philadelphia Naval Base. Current Delaware River Channel depths of 40 ft. are inadequate to efficiently handle existing bulk commodity vessels. A draft interim feasibility report recommends deepening the existing 40 ft. project depths of 40 ft. are inadequate to efficiently handle existing bulk commodity vessels. A draft interim feasibility report recommends deepening the existing 40 ft. project to 45 ft., widening bends, and anchorage deepening of the 105 miles of channel length; approximately 85 miles will require dredging. (This is approximately 25 miles of additional dredging over the 60 miles of channel already dredged.)

Project sponsor recommendation

Work remaining to be done consists of finalizing the Delaware River Main Channel deepening report and determining the feasibility of a mid-stream lightering and transfer facility in lower Delaware Bay. Fiscal year 1992 funds are being used to continue the study. We wish to support an FY '94 appropriation of $4,000,000 to continue the preconstruction engineering and design phase of a 45 ft. deep main channel. Local interests are convinced of the merits of this project, and the Delaware River Port Authority has identified themselves as the sponsor for cost-sharing.

KILL VAN KULL AND NEWARK BAY CHANNEL, NEW YORK AND NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$28,500,000

Project description

This navigation project, as authorized, will deepen the existing 35 ft. channels in the Kill Van Kull and Newark Bay to 40 ft. below mean low water (MLW). The project serves Port Newark/Elizabeth marine terminals with several widenings and a turning basin. The work covers Staten Island, New York; and Jersey City, Bayonne, Elizabeth, and Newark, New Jersey.

The Port Authority of New York and New Jersey, the local cooperating agency for this project, wishes to take construction in stages, with the first phase going to 40 ft. This project will immeasurable benefit Port Newark/Elizabeth, which together comprise the nation's largest container port.

The present 35 ft. channel precludes modern ocean voyage container ships from full loading. Substantially increased shipping costs, if allowed to continue, will discourage fleets with larger draft vessels from utilizing these facilities.

Project sponsor recommendation

The Kill Van Kull and Newark Bay Channels deepening project was authorized for construction in the Fiscal Year 1985 Supplemental Appropriations Act (Public Law 99–98) and The Water Resources Development Act of 1986 (Public Law 99–662). The Port Authority is providing local cooperation and the non-federal share of this project.

With the deepening of the channels from 35 ft. to 40 ft. more than half complete, the Corps of Engineers is now continuing a critical phase of construction consisting largely of rock removal through blasting. Although this is a complex construction job, vessels are safely navigating the channels in the construction area. This is to the credit of the U.S. Coast Guard, the U.S. Army Corps of Engineers, and the Contractor. As a result of this coordinated effort, the Contractor has been able to accelerate the construction schedule.

Work towards completion of this project is important to the competitive position of the Port, and we, therefore, support the Port Authority of New York and New Jersey request for an FY '94 Budget appropriation of $28,500,000 to continue the first phase rock removal to a 40 ft. depth.

MIDDLE THOROFARE HARBOR, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$325,000

Project description

Middle Thorofare Harbor is located in Cape May County, New Jersey. This thorofare is a major landing area for commercial fishing fleets in the South Jersey area. The project is adjacent to other federally authorized project; Cape May Inlet Navigational Project and the shore protection project for the U.S. Coast Guard and Cape May City area.

Project sponsor recommendation

The project sponsor wishes to express support for a fiscal year 1994 appropriation of $325,000 to begin construction under the authorization of Section 107 of the Rivers and Harbor Act of 1960. The sponsor will provide the necessary non-federal share of this project.

NEW YORK HARBOR AND ADJACENT CHANNELS, CLAREMONT CHANNEL, NEW JERSEY (PRECONSTRUCTION ENGINEERING AND DESIGN

Fiscal year 1994 project sponsor recommendation	$500,000

Project description

Claremont Terminal Channel is located in Jersey City, Hudson County, New Jersey, about two miles long, extending into Upper New York Bay. The study area is within the Port of New York and New Jersey, the leading port on the Atlantic coast.

Claremont Channel is presently a non-federal channel at an average depth of 27 ft. MLW located just north of the Port Jersey Channel. A project to deepen Claremont Channel to 42 ft. MLW was authorized for construction subject to a favorable report by the Secretary of the Army in the Water Resources Development Act of 1986 (Public Law 99–662). While authorized to 42 ft., the modified project will provide adequate shipping economies with a 34 ft. channel.

The major users of the channel are two scrap metal companies and a crushed stone aggregate terminal. For the past 10 years, scrap metal exports have averages more than 600,000 long tons per year, and crushed stone transhipments for the past six years have totaled nearly four million tons annually. Combined, these three firms employ 300 persons directly and nearly 3,000 indirectly through suppliers, transporters, and longshoremen.

Project sponsor recommendation

Local interests desire a deeper channel to better accommodate vessels used to export scrap metals and tranship crushed stone. Deepening will increase transportation efficiency be reducing the costs of topping off vessels and waiting for favorable tides. Local interests also believe that greater channel depths will increase safety by permitting vessels to operate with more desirable clearances.

We wish to support an FY '94 Budget appropriation of $500,000 for continued preconstruction engineering and design work for improvements to the Claremont Channel. These funds will be used to complete economic analyses and to continue environmental and engineering work. This preconstruction engineering and design effort is scheduled for completion in FY '95. The State of New Jersey supports this project and has expressed an intent to fund the non-federal share at construction.

NEW YORK HARBOR AND ADJACENT CHANNELS, PORT JERSEY CHANNEL, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$3,000,000

Project description

This project will deepen a 35 ft. access channel (non-federal) to a 41 ft. channel (federal), providing a safe and economical use of this waterway at all stages of tide. The Port Jersey Access Channel presently serves the Global Marine Container Terminal, which in turn serves 13 shipping lines and two slot carriers. In 1991, this facility handled 300 ships and 104 barge arrivals with over 200,000 container units. Of the arriving vessels, 75 percent had design drafts too deep for the channel, with a third actually loaded to drafts necessitating delays awaiting high tide. More than 300 terminal employees, with an annual payroll of over $21 million, as well as another 120 contract workers, depend upon this facility for their livelihood. As a privately-owned terminal, Globe also pays nearly $4.0 million in federal, State, and local taxes annually.

Also served by this-channel is the U.S. Army Military Ocean Terminal facility and the Port Authority of New York and New Jersey Auto Marine Terminal. This improvement was authorized by the Water Resource Development Act of 1986.

Project sponsor recommendation

The future of this facility is critically dependent upon a channel of at least 40 ft. deep so that it may remain competitive with other container terminals served by waterways of this and greater depths. With the preconstruction engineering and design phase, including the General Design Memorandum portion of the project, scheduled for completion in fiscal year 1993, this project is ready to proceed to construction.

We wish to express our support for an FY '94 Budget appropriation of $3,000,000 to complete preconstruction engineering and design/specifications, and to commence construction of this greatly needed channel improvement. The State of New Jersey supports this project and is participating with the Port Authority of New York and New Jersey and the Corps of Engineers in developing the Local Cooperating Agreement necessary to advance a construction start in FY '94.

NEW YORK HARBOR AND ADJACENT CHANNELS, RARITAN BAY ANCHORAGE AREAS (STUDY)

Fiscal year 1994 project sponsor recommendation $200,000

Project description

Raritan Bay Anchorage Areas, a part of the New York Harbor and Adjacent Channels project, include two separate anchorage areas to be considered for navigation improvements: Perth Amboy and Sandy Hook. Perth Amboy anchorage area, located at the junction of Raritan River, Raritan Bay, and Arthur Kill, was authorized to depths ranging from 25–38 ft. deep, a length of one mile, and a width of 1,800 ft. Sandy Hook, due west of the tip of Sandy Hook peninsula at the entrance to the Main Ship Channel, is 1.4 miles long and 1,600 ft. wide, but this anchorage was never constructed.

Recent investigations verify that there is a significant increase in the number of commercial navigations vessels with drafts over 40 ft. and lengths of approximately 1,000 ft. entering the area. The larger vessels occupy more room in the anchorage areas, and with the increased size, the ships maneuverabilities decrease which require greater clearances between the vessels. As the larger vessels each require more anchorage room, the existing anchorage areas can accommodate fewer vessels. The overcrowding and the subsequent additional movements create a great potential for costly vessel accidents and spills.

Project sponsor recommendation

Fiscal year 1993 funds are being used to initiate the reconnaissance phase of this study. We wish to support an FY '94 Budget appropriation of $200,000 to complete the reconnaissance phase and initiate the feasibility study phase of this project. The reconnaissance phase is scheduled for an April 1994 completion and the feasibility study is scheduled to be completed in May 1997.

The Port Authority of New York and New Jersey has expressed support for this study and has indicated a willingness to cost-share the feasibility phase of the study.

NEW YORK HARBOR AND ADJACENT CHANNELS—NEW YORK HARBOR, RED HOOK FLATS ANCHORAGE AREAS, NY AND NJ (STUDY)

Fiscal year 1994 project sponsor recommendation $200,000

Project description

Within the Lower and Upper New York Bays, three anchorages exist that cannot accommodate today's class of ocean-going general cargo ships and tankers. The anchorages were designed by the Corps of Engineers in the early 1960's for a vessel averaging 525 ft. in overall length with a draft of 30 ft. Today's modern container ships are almost 1,000 ft. long with drafts of 40 ft., therefore requiring additional space and depth beyond that allowed for in the original design. If the bi-state port is to remain productive, it must modernize to accommodate today's larger vessels.

Project sponsor recommendation

We wish to express our support for an FY '94 Budget appropriation of $200,000 to initiate the feasibility study phase for the deepening of the Red Hook Flats. The Corps of Engineers has the authority to undertake this study under a Congressional resolution adopted by the Senate Committee on Environment and Public Works on December 5, 1980. This project is necessary to provide safe navigation and maintain our bi-state port's productivity by being able to accommodate today's larger class of vessels. The Port Authority of New York and New Jersey has indicated its willingness to cost-share the feasibility phase of the study.

NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT, NEW YORK AND NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation $3,900,000

Project description

This project is aimed at the removal of approximately 2,230 sunken hulks and 149 decaying shore structures that are the sources of dangerous, unsightly and costly harbor drift. The Corps of Engineers has estimated that nearly 18,000 commercial, public, and recreation vessels collide annually with drift in our port, causing damage to propellers, shafts, and hulls. In addition, annual associated repair costs and other economic losses average greater than $53 million.

We have been advised by the New York District Corps of Engineers that the economics of the Drift Project were re-evaluated and satisfy new Corps of Engineers budget policy criteria. The project authorization was extended in 1989 and the economic study has delayed the cleanup project for over 2½ years. We are requesting funds for much needed construction. We differ with the Administration's view that individual reaches of the project must be evaluated as to cost benefit. Such action will only delay and increase project costs.

Project sponsor recommendation

An appropriation in fiscal year 1994 will be used to complete construction of the NY Brooklyn 2A Reach and the NJ Weehawken-Edgewater 2A Reach. Planning engineering, and design work to be funded include the NY Brooklyn 2A Reach and the Weehawken-Edgewater 2A Reach, as well as construction management for the two reaches. These projects are necessary if we are to avoid hazards to navigation and drift on New York and New Jersey beaches.

This project is strongly supported by the States of New York and New Jersey and the City of New York, all local sponsors to the project, who in this time of tight budgets are prepared to pay their non-federal share of costs. Therefore, we support an appropriation of $3,900,000 of Construction General Funds for this project in FY '94.

SALEM RIVER, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$5,000,000

Project description

This project is a tributary of the Delaware River located in Salem County, New Jersey. The existing 112 ft. deep federal project varies in width from 100 to 150 ft. and provides for an entrance channel from the Delaware River to a fixed highway bridge in Salem, New Jersey, a distance of about five miles. These dimensions do not provide adequate depths for widths to permit efficient transit of vessels calling at the Port of Salem. This necessitates the use of costly shipping practices, including lighloading, waiting for high tides, and use of smaller ships than terminal facilities can accommodate. The problem is expected to worsen as the commercial navigation fleet expands. The plan of improvement was formulated in an Interim Feasibility Report to the Delaware River Comprehensive Navigation Study.

The Draft Environmental Assessment found no significant impact, and a Section 401 water quality certificate will be obtained from the New Jersey Department of Environmental Protection and Energy prior to construction. This preconstruction engineering and design effort is scheduled for completion in March 1993.

Project sponsor recommendation

Fiscal year 1993 funds were used to continue the preconstruction engineering and design effort, including completion of the General Design Memorandum and initiation of plans and specifications.

We wish to support a fiscal year 1994 Budget appropriation of $5,000,000 to initiate construction for deepening of the existing project to 18 ft MLW, widening to 180 ft., providing a turning basin, and effectuate a channel realignment to increase vertical clearance under a powerline and minimize dredging costs.

This facility is important to commerce and the economy of the entire South Jersey region, and presently ranks as the 38th largest export port in the United States. Not only will the deepening of this channel allow for larger vessels and new job opportunities, but there will be an increase in landside public/ private investment from the beneficiaries and a State port agency.

The State of New Jersey supports this project and has expressed an intent to provide the non-federal share at construction.

SHOAL HARBOR AND COMPTON CREEK, BELFORD, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$2,400,000

Project description

The study area encompasses Compton Creek and Shoal Harbor, located next to Belford in Monmouth County, New Jersey. The existing federal channel begins at the Main Street Bridge in Belford and extends out into Sandy Hook Bay. The purpose of the current effort is to assess the feasibility of modifying the existing project with a view toward deepening the existing 8 ft. inner channel and the 12 ft. outer channel.

The plan of improvement consists of deepening the existing inner portion of the channel (from Main Street to inside the mouth of Compton Creek) from 8 ft. MLW and 75 ft. wide to 10 ft. MLW. The channel width would remain the same, but would be shifted approximately 15 ft. to the east to allow for additional berthing area for the improved design depth at the Belford Cooperative on the west bank. The existing outer portion of the channel (from inside the mouth of Compton Creek to deep water in Sandy Hook Bay, a distance of approximately 7,900 ft.) would be deepened from 12 ft. MLW and 150 ft. wide to 14 ft. MLW. The outer channel width would also remain the same.

Project sponsor recommendation

Because of increasing fleet vessel size, local fishermen have to wait for favorable tidal conditions and, consequently, shorten their fishing trips. This results in reduced catch sizes. These conditions translate into reduced revenues, increased operating costs, and increased repair costs caused by grounding of their vessels. Channel deepening and widening will reduce or eliminate these inefficiencies.

The New Jersey Department of Environmental Protection and Energy, the local sponsor for the project, had previously indicated their desire that the project be expanded to accommodate a proposed ferry terminal at Belford Harbor. Subsequent to coordination with Monmouth County officials, the State has recently concurred, by letter dated February 4,1993, in the Corps of Engineers recommended plan and stated their desire for resumption of this project.

This project is strongly supported by the State of New Jersey and Monmouth County. Therefore, we wish to request an FY '94 appropriation of $2,400,000 to commence the construction of this improvement to Belford Harbor as authorized by Section 107 of the Rivers and Harbors Act of 1960.

WATER RESOURCES DEVELOPMENT ACT OF 1992, SECTION 326, NY BIGHT, HYDRO-ENVIRONMENTAL STUDY—(STUDY)

Fiscal year 1994 project sponsor recommendation	$3,000,000

Project description

As a continuation of the study pursuant to Section 728 of the Water Resources Development Act of 1986, the Secretary shall study an hydro-environmental monitoring and information system in the New York Bight and New York Harbor and tributaries to the head of tide, in the form of a system using computerized buoys and radio telemetry that allows for the continual monitoring (at strategically located sites throughout the New York Bight and Harbor region) of the following: wind, wave, current, salinity, and thermal gradients and sea chemistry, in order to measure the effect of changes due to air and water pollution, included changes due to continued dumping in the Bight. This effort will include the study of a verified, nested, high resolution Harbor/Bight Apex numerical model, and supportive monitoring and information systems.

This New York Bight and Harbor effort will address the engineering, environmental, and social impacts of natural and man-made changes to the New York Sight, including water quality parameters such as contaminant and sediment transport effects, and nutrient eutrophication.

Project sponsor recommendation

This project extends all particulars of the New York Bight model previously addressed under Section 728 of the Water Resources Development Act of 1986, to the complex New York Harbor Environs. It will also add features to the Bight model itself to insure complete comprehensive modeling of the harbor and Bight for all engineering, physical, and environmental purposes, making it the most advanced water quality and transport model in the country.

It is estimated that $3 million per year for two years will complete the model in FY '95. It is unfortunate that Section 326 authority only provides for $1 million per year. Therefore, we support a $3 million FY '94 appropriation and will seek language modifications to authorize its usage, since model completion cannot wait until the next century.

WATER RESOURCES DEVELOPMENT ACT OF 1992, SECTION 405, SEDIMENTS DECONTAMINATION TECHNOLOGIES (STUDY)

Fiscal year 1994 project sponsor recommendation	$5,000,000

Project description

Based upon a review of decontamination technologies identified pursuant to Section 412(c) of the Water Resources Development Act of 1990, the Administrator of the Environmental Protection Agency and the Secretary shall, within one year after the date of the enactment of this Act, jointly select removal, pre-treatment, and decontamination technologies for contaminated marine sediments for a decontamination project in the New York/New Jersey Harbor.

Upon selection of technologies, the Administrator and the Secretary shall jointly recommend a program of selected technologies to assess their effectiveness in rendering sediments acceptable for unrestricted ocean disposal or beneficial reuse, or both.

Project sponsor recommendation

Section 405 of the Water Resources Development Act of 1992 authorizes an appropriation of $5,000,000 for fiscal years beginning after September 30, 1992 to conduct this study. We wish to support an FY '94 appropriation of $5 million for this important decontamination study effort.

WILL'S HOLE THOROFARE, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$225,000

Project description

Will's Hole Thorofare is located along the Atlantic coast of New Jersey inside of Manasquan Inlet. The navigational channel is heavily used by commercial fishing industry. This area is one of the main landings for commercial boats along the coastline.

Project sponsor recommendation

The project sponsor wishes to express support for a fiscal year 1994 appropriation of $225,000 for the construction of this project which was carried out under the authorization of Section 107 of the River and Harbor Act of 1960. The sponsor has cost-shared all of the proceeding studies and will cost-share the non-federal cost of this project.

FLOOD CONTROL

HACKENSACK RIVER BASIN, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation	$400,000

Project description

The Hackensack River Basin is situated in the northeasterly part of New Jersey. The Hackensack River and its tributaries are located primarily in Bergen County, New Jersey with portions in Hudson County, New Jersey and Rockland County, New York. This area is affected by both fluvial and tidal flooding.

In 1990, a study was authorized under the Corps' Support For Others (SFO) program. The New Jersey Department of Environmental Protection and Energy funded this study for localized flooding problems in the Basin. The purpose of the SFO study was to investigate two localized areas of flooding, identified by local interests within the Hackensack River Basin to determine if any economically feasible plan of improvement could be identified. The SFO report, completed in April 1992, presented a feasible plan to the sponsor.

Project sponsor recommendation

The study area is limited to the tidal portion of the Hackensack River and its tidal tributaries from the confluence of the river with the Passaic and Newark Bays upstream to Oradell Reservoir in Bergen County, New Jersey; a distance of approximately 22 miles.

In FY '93, a Congressional add of $100,000 was appropriated to revise the SFO report into a reconnaissance level report. Fiscal year 1994 funds in the amount of $400,000 are being requested to initiate the cost-shared feasibility study.

The estimated completion date for this feasibility effort is December 1995. The New Jersey Department of Environmental Protection and Energy has expressed interest in this study.

LOWER SADDLE RIVER, NEW JERSEY (PRECONSTRUCTION ENGINEERING AND DESIGN)

Fiscal year 1994 project sponsor recommendation	$1,300,000

Project description

Major flooding of the Saddle River in recent years has plagued the communities of Garfield, Wallington, South Hackensack, Lodi, Saddle Brook, Rochelle Park, and Fair Lawn, New Jersey. The Lower Saddle River study area, located in Bergen County, affects over 2,500 recreational, commercial, and industrial establishments.

In an effort to provide protection against flooding in these communities, the proposed improvements for the Lower Saddle River consist of 5.2 miles of channel modification along the Saddle River, 1.7 miles of channel modification along Sprout Brook, the straightening of a meander near the mouth of the Saddle River and modifications to 22 bridges on both streams. These project improvements would provide protection against a 150-year flood event to the affected area. The recommendations for flood control of Saddle River would eliminate over $6,000,000 of flood damage to the area annually.

Project sponsor recommendation

This preconstruction engineering and design effort was authorized by the Water Resources Development Act of 1986. We wish to express support for a fiscal year 1994 Budget appropriation of $1,300,000 which will be used to continue the preconstruction engineering and design phase. Included in the PE&D is the completion of topographic data collection and mapping, initiating collection of subsurface data, initiating preparation of a cultural resources survey report, initiating an hydraulic design, and project coordination. This preconstruction engineering and design effort is scheduled for completion in 1994.

MANASQUAN RIVER BASIN, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation	$150,000

Project description

The Manasquan River Basin is located in central New Jersey, encompassing 81.8 square miles in Monmouth and Ocean Counties, and bordering the Atlantic Ocean to the east and the Raritan Basin to the north. The Basin periodically experiences heavy rains, tropical hurricanes, and localized thunderstorms which result in losses to municipal governments for flood fighting and rescue work, losses to businesses including production and profits, loss of wages to individuals, and interruption of traffic, communications, and normal activities in the flood area. In recent years, the Manasquan River Basin has experienced a significant amount of population and development growth which has further increased damages and losses during flooding events. Recent storm events which caused flooding occurred during August 1987 and twice during July 1989. In these storms, heavy rains forced the Manasquan River to overflow its banks and cause severe damages in Howell and Freehold Townships. In July 1989, both Freehold and Howell Townships declared states of emergency in order to clear the streams of debris and sediment.

Project sponsor recommendation

Local interests desire a study to determine the advisability of providing improvements in the interest of flood control and other allied purposes with due concern for the environmental values of the Manasquan Basin. Freehold and Howell Townships, and Ocean and Monmouth Counties have all expressed the need for a study. The primary purposes of the reconnaissance study are to define the problems, determine federal interest, estimate time and cost for the feasibility study, identify a local sponsor, and assess interest and support for the cost-shared feasibility study.

We wish to support an FY '94 Budget appropriation of $150,000 which will be used to fully fund the study phase of this project. Freehold and Howell Townships, and Ocean and Monmouth Counties have all expressed the need for this study, and the State of New Jersey is prepared to act as the non-federal sponsor and cost-share this project.

MOLLY ANN'S BROOK, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$1,000,000

Project description

The study area, which is approximately 12 miles west-northwest of New York City, is located in Haledon, Prospect Park and Paterson, New Jersey. It includes Molly Ann's Brook from Union Avenue in Paterson upstream for 2.2 miles to Church Street in Haledon. Major flooding in recent years has adversely affected about 520 residential, commercial, and industrial establishments in the 100-year flood plain.

The plan of improvement recommends a modified channel with a total length of 14,730 ft. which combines earthen and riprap-lined trapezoidal channels with concrete flumes and a drop structure.

The proposed plan would provide general protection against a 50-year flood event throughout the planning area. The average annual equivalent damages which would result without the project are estimated at over $2,000,000.

Project sponsor recommendation

The Molly Ann's Brook at Haledon, Prospect Park and Paterson, New Jersey flood control project is authorized for construction by the Water Resources Development Act of 1986. Local interests have expressed a willingness to act as the non-federal cooperating agent for this flood control project.

We wish to support an FY '94 Budget appropriation of $1,000,000, which will be used to continue the construction phase of this project, which began in FY '93. The State of New Jersey supports this project and has funds available to cost-share the non-federal construction phase.

PASSAIC RIVER MAIN STEM, NEW JERSEY AND NEW YORK (PRECONSTRUCTION ENGINEERING AND DESIGN)

Fiscal year 1994 project sponsor recommendation $17,000,000

Project description

The Passaic River Basin encompasses 935 square miles in northern New Jersey and the southeastern New York State. The Basin is drained by the Passaic River and its seven major tributaries: Saddle River, Prompton River, Ramapo River, Pequannock River, Wanaque River, Rockaway River, and Whippany River. The flood plain area comprises more than 80 square miles and encompasses 45 municipalities.

The plan has been developed to protect over 30,000 structures in the critical flood problem area. The most severe recent flood occurred in April 1984, claiming two lives, with damages estimated at $360,000,000. The entire Basin, or portions thereof, was declared a disaster area in 1968, 1971, 1973, twice in 1975, and in 1984. The recurrence of the October 1903 flood of record would cause damages of nearly $2 billion, as well as the potential loss of lives.

The major elements of this flood control proposal are the two tunnels, with the key being the 13.5-mile long, 39 ft. diameter main tunnel, which will carry floodwaters from an inlet at the upper end of the Pompton River down to an outlet on the west bank of Newark Bay. The diversion tunnels and associated surface work are designed to protect against a 100-year flood event.

Project sponsor recommendation

This is a project for the entire Passaic River Basin and, as such, the Passaic River Main Stem Flood Protection Feasibility Report has recommended the preparation of preconstruction engineering and design studies for this flood control plan. As you know, Congress authorized a revised version of the project which the Governor's Office has asked the State's Department of Environmental Protection and Energy to examine carefully. Their review will include an evaluation of both the environmental and fiscal impact of the tunnel project on our state.

We wish to support a fiscal year 1994 scheduled Budget appropriation of $17,000,000 to continue the preconstruction engineering and design phase effort. This funding level will allow the Corps of Engineers to complete this study phase as scheduled in FY '97.

PINE BROOK, MANALAPAN TOWNSHIP, NJ (PRECONSTRUCTION ENGINEERING AND DESIGN)

Fiscal year 1994 project sponsor recommendation $100,000

Project description

This planning and engineering effort addresses the need for flood control improvements along Pine Brook in the Township of Manalapan, New Jersey. The Pine Brook Basin, located in east Central New Jersey, drains an area of 5.2 square miles and flows for a distance of 5.3 miles.

The planning and engineering study was authorized by the Water Resources Development Act of 1986, Section 401(c). The authorized plan as developed entails channel modifications, clearing, and snagging. The channel modification consists of widening and deepening of approximately 6,000 linear ft. of Pine Brook. The clearing and snagging would be accomplished for a distance of 700 ft. above and 1,000 ft. below the channel limits.

Project sponsor recommendation

The project funding has been deferred but can now be used to initiate the planning and engineering portion of the study. The authorized plan and alternatives include development of benefits and costs, and the extent of environmental impacts.

Therefore, we wish to support an FY '94 Budget appropriation of $100,000 to provide the funding to initiate the preconstruction engineering and design portion of this project for which the State of New Jersey is now prepared to cost-share.

POPLAR BROOK, NJ (STUDY)

Fiscal year 1994 project sponsor recommendation	$350,000

Project description

This study will determine the need for flood control projects along Poplar Brook, New Jersey. Poplar Brook has a drainage area of four square miles and originates at the western boundary of Ocean Township and flows eastward through the Borough of Deal into the Atlantic Ocean. The areas subject to flooding are low-lying grounds along Poplar Brook and the area along the brook from below Norwood Avenue to Ocean Avenue in the borough of Deal. Damages to residential properties over the past several years have amounted to over $750,000.

This flood control project was authorized in Section 401(e) of the Water Resources Development Act of 1986 and includes: the reconstruction of the Brook through the Borough of Deal, to accommodate the run-off from a storm having an average frequency of occurrence of once every 15 years, replacement of the culvert through the Conrail railroad embankment with a new culvert designed to pass a 15-year flood event, and additional upstream improvements. This locally-preferred project and alternative flood control measures will be evaluated during the reconnaissance phase of the study.

Project sponsor recommendation

Fiscal year 1994 funds are needed to initiate the reconnaissance study, and thereby determine the need for more detailed studies, to obtain local cost-sharing agreements, and to develop a plan of study for the feasibility phase.

We wish to support an FY '94 Budget appropriation of $350,000 which will be used to implement the reconnaissance study phase of this project.

RARITAN RIVER BASIN, GREEN BROOK SUB-BASIN, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$3,500,000

Project description

Green Brook Sub-basin.—Located within the Raritan River Basin in north central New Jersey (Middlesex, Somerset, and Union Counties), the Green Brook Sub-basin study area drains approximately 65 square miles of urban, suburban, and industrialized area. Major flooding losses include not only physical damage to property, but loss of public access to commercial and industrial activity, rail and vehicular traffic. In 1971, Hurricane Doria caused more than $22 million in damage, while another major storm in 1973 contributed to six deaths, residential evaluation, and over $25 million in damages. Today, such a storm would cost nearly $65 million.

The Water Resources Development Act of 1986 authorized construction of the project described as Plan A in the report of the District Engineer. This project would include protection for the upper Green Brook Sub-basin, the Stony Brook Sub-basin, and the Stony Brook Tributary, in addition to protection for the Lower Green Brook Tributary, in addition to protection for the Lower Green Brook Sub-basin. The Green Brook Flood Control Commission and the State of New Jersey has expressed a preference for the authorized plan, which would also provide protection to the upper basin communities.

Project sponsor recommendation

In 1987, Congress adopted legislation which included a provision making it clear to the Corps of Engineers that protection is to be designed for the entire Green Brook Basin, rather than only the lower portion of the Basin, as had at one time been studied by the Corps of Engineers.

New Jersey has recently reaffirmed its support for the project to provide full protection for all of the people of the Basin. Last year, the New Jersey Legislature passed a bill establishing a program to plan for the non-federal share for this and other water resources-related projects.

We believe that the Green Brook Flood Control project should be carried forward to achieve protection at the earliest possible date. This project is needed to prevent loss of life and property, as well as the trauma caused every time there is a heavy storm. We wish to support an appropriation for the project in FY '94 of $3,500,000.

SHORE PROTECTION/BEACH EROSION

BARNEGAT INLET TO LITTLE EGG INLET, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation $350,000

Project description

The study area was originally authorized under Section 101–A of the Water Resources Development Act of 1976 for advanced engineering and design. This area was reauthorized under the Water Resources Development Act of 1986. Study would review the existing beach erosion control projects within the study area and determine whether further modification or changes are necessary in order to provide adequate shore protection for the adjacent communities. In addition, the study would look at providing additional protection to the Brigantine National Wildlife Refuge, which is included in the study area.

Project sponsor recommendation

The State of New Jersey wishes to express support for a fiscal year 1994 appropriation of $350,000 to begin a reconnaissance study of this area. The State of New Jersey will act as the non-federal sponsor if further studies are recommended.

BRIGANTINE INLET TO GREAT EGG HARBOR, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation $380,000

Project description

The study area is a portion of the New Jersey coastline extending approximately 15 miles from Brigantine Inlet to Great Egg Harbor Inlet. It encompasses five communities including Atlantic City. The principal purposes of the study are to investigate shore protection/flood control and water quality problems attributed to natural and man-made conditions. The study will determine the effects of those conditions on man's activities in the coastal environment in an effort to reduce damages, improve coastal planning and engineering, reduce maintenance dredging of federal projects, improve water quality, and alleviate coastal erosion. Additionally, the understanding of nearshore and estuarine environments and physical processes will assist New Jersey in identifying sources and trajectories for noxious floatable debris and spills of pollutants.

Project sponsor recommendation

Fiscal year 1993 funds are being used to continue the feasibility portion of the study. The State of New Jersey Department of Environmental Protection and Energy has signed an agreement to cost-share the feasibility phase of this study. We, therefore, wish to support a fiscal year 1994 Budget appropriation of $380,000 based upon the current feasibility study schedule for this project.

CAPE MAY POINT, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation $300,000

Project description

The Borough of Cape May Point is at the extreme southerly end of the state and has experienced significant shoreline erosion during the past several years. This erosion has caused significant economic, social, and ecological losses to both the State and local communities.

There is currently authorized a study by the Army Corps of Engineers in the Lower Cape May Meadows area of the coastline. We believe it is extremely important to expand this current study to include the Borough of Cape May Point.

Project sponsor recommendation

The State of New Jersey supports the efforts by the Corps of Engineers in the current reconnaissance study of the Lower Cape May Meadows and will continue its support for this project to include the Borough of Cape May Point. We wish to request a Budget appropriation in fiscal year 1994 of $300,000 to continue this effort.

DELAWARE BAY COASTLINE, NEW JERSEY AND DELAWARE (STUDY)

Fiscal year 1994 project sponsor recommendation $600,000

Project description

The study area is located along portions of the Delaware and New Jersey shorelines of the Delaware Bay. Approximately 60 miles of shoreline will be investigated for two areas, Cape Henlopen to the Chesapeake and Delaware Canal in the State of Delaware and Cape May Point to the Salem River in the State of New Jersey. The study will evaluate all adverse impacts associated with storm damages along the shoreline and determine the costs and benefits of potential federal projects.

The Delaware Bay coast has a long history of severe erosion subjecting shoreline properties to storm damage from wave attack and tidal inundation which has caused loss of lives, severe economic losses, and social disruption. Comparison of early shoreline charts show continual erosion and accretion of shoreline over the past 112 years of record, resulting in substantial quantities of material lost, thereby narrowing and lowering the beaches. The areas where specific long-term erosion problems have occurred are Roosevelt Inlet/Lewes Beach and Mispillion Light in Delaware, Elsinboro, Pierces Point, and Villas in New Jersey with erosion rates estimated as high as 6 ft. per year.

Project sponsor recommendation

The goal of the study is to provide information on the long-term shoreline changes which will serve as a basis for sound coastal planning decisions and new technologies including wetlands restoration, nourishment cycles, and support of estuary programs.

As the data is needed in order to deal with the beach erosion/flooding problems in the Delaware Bay area and to implement remedial measures, we wish to support a Budget appropriation of $600,000 in fiscal year 1994 for this study which was authorized by the Water Resources Development Act of 1986.

Both the State of New Jersey and the State of Delaware are supportive of the study and have expressed a willingness to cost-share the feasibility phase.

LOWER CAPE MAY MEADOWS, NEW JERSEY SHORE PROTECTION (STUDY)

Fiscal year 1994 project sponsor recommendation $500,000

Project description

The study area is located along the southern Atlantic coast of New Jersey, extending approximately 1.5 miles from Cape May City to Cape May Point. Lower Cape May Meadows is situated along the Atlantic Flyway and contains a State Park with important coastal freshwater wetlands which are vital resting areas for shorebirds and raptors during their seasonal migration. The study purposes are to investigate shoreline protection, and restoration of fish and wildlife habitat and water quality.

Portions of the shoreline along the study area have eroded over 1,000 ft. with erosion rates approaching 30 ft. per year since the construction of the federal navigation project at Cape May Inlet. The existing beachfill project for Cape May Inlet to Lower Township currently under construction will have little downdrift benefits for Cape May Meadows. This is because the shoreline has regressed significantly and the terminal groin at the western end of the Cape May City project area will divert sand offshore, preventing the nourishment of downdrift beaches.

Project sponsor recommendation

Due to its unique and important location, strong support for this study has been expressed by federal, State, and other resource agencies and organizations including the U.S. EPA, USFWS, New Jersey Department of Environmental Protection and Energy, Ducks Unlimited, New Jersey Audobon Society, and the Nature Conservancy, which is a major landholder.

We wish to support an FY '94 Budget appropriation of $500,000 to fund this study to develop recommendations for the prevention of further water quality degradation and pollution of New Jersey coastal waters. Also, the adjacent Cape May Point should be included in this study, as each project is dependent upon the other, and a combined effort will save both federal and State dollars.

RARITAN BAY AND SANDY HOOK BAY, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation $320,000

Project description

The study area is experiencing flooding caused by both rainfall and coastal storm inundation. This problem has worsened in recent years due to the loss of protective beaches and increased urbanization in the area, with structures susceptible to flooding from rainfall and coastal storm surges, erosion and wave attack, combined with restrictions to channel flow in the tidal creeks. This problem is further intensified due to the lack of any significant drainage slope. Probable solutions to this problem would be extensions and/or improvements on the existing project, which currently provides segmented storm and hurricane damage protection for a few communities in the form of beachfills, dunes, levees, tidegates, and appurtenant features. Strong local and State support for a region-wide solution to the problems exists. The New Jersey Department of Environmental Protection and Energy has indicated an interest and is aware of the current cost-sharing policies.

Project sponsor recommendation

This storm damage protection reconnaissance study is beneficial to coastal Bayshore communities not presently protected from storm damage including inundation, wave attack, and coastal erosion.

Therefore, we wish to support a fiscal year 1994 Budget appropriation of $320,000 which will be used to continue the feasibility study phase of this project.

RARITAN BAY AND SANDY HOOK BAY, CLIFFWOOD BEACH, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$700,000

Project description

Section 934 of the Water Resources Development Act of 1986 grants the Corps of Engineers the authority to study completed Beach Nourishment projects for a period of up to 50 years to determine if additional improvements are required. The post-authorization revisit would determine whether or not there are high priority federal benefits to justify new work and warrant federal funding to resume nourishment of these important coastal works.

Project sponsor recommendation

We wish to request an FY '94 Budget appropriation of $700,000 to allow the Corps of Engineers to resume engineering and design of the beachfill project at Cliffwood Beach.

RARITAN BAY AND SANDY HOOK BAY, SECTION 934, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation	$500,000

Project description

Section 934 of the Water Resources Development Act of 1986 grants the Corps of Engineers the authority to study completed Beach Nourishment projects for a period of up to 50 years to determine if additional improvements are required. This post-authorization revisit would determine whether or not there are high priority federal benefits to justify new work and warrant federal funding to resume nourishment of these important coastal works.

Project sponsor recommendation

We wish to support a fiscal year 1994 Budget appropriation of $500,000 to allow the Corps of Engineers to complete this study of the storm damage reduction benefits to the Raritan River Bayshore region to be realized from renewed coastal beach nourishment projects.

SANDY HOOK TO BARNEGAT INLET, NEW JERSEY (CONSTRUCTION)

Fiscal year 1994 project sponsor recommendation	$36,000,000

Project description

The overall project area lies along the Atlantic Ocean Shoreline of New Jersey in Monmouth and Ocean Counties between Sandy Hook to the north and Barnegat Inlet to the south.

Erosion has seriously reduced the width of most beaches in the study area, with consequent exposure of shore to storm damage. The State of New Jersey and mayors of the affected communities are also very concerned over the increased potential for damages to residential and commercial structures.

The March 1962 storm caused $31,000,000 worth of damages (based on today's dollars) along the 25 mile stretch of shore from Sandy Hook to Manasquan Inlet. Subsequent emergency restoration works in this reach cost over $7 million (again, in 1987 dollars).

Improvements to Section I include 12 miles of beach placement, construction of 23 groins, and extension of 14 existing groins. Section II also suffers from eroding beaches and calls for beach placement over nine miles.

Project sponsor recommendation

Consistent with the Water Resources Development Act of 1986, the non-federal share of construction and maintenance of the Ocean Township to Sandy Hook Reach consists of monies expended by non-federal interests for reconstruction of the seawall at Sea Bright and Monmouth Beach.

The urgency of this project results from even less beachfront being in place today as a result of erosion and storms. Local communities are fearful that the next coastal storm would be catastrophic with increased risk of coastal flooding from storm surges.

The State of New Jersey has stated its support for this project, and we wish to request an FY '94 Budget appropriation of $36,000,000 for this project. This funding will provide $35,000,000 to continue the construction phase of this improvement, and the remaining $1,000,000 will be utilized to perform preconstruction monitoring and advance commencement of construction at Asbury Park.

TOWNSEND INLET TO CAPE MAY INLET, NEW JERSEY (STUDY)

Fiscal year 1994 project sponsor recommendation $490,000

Project description

The study area is located along the southern Atlantic coast of New Jersey, extending approximately 12 miles from Townsend Inlet to Cape May Inlet. The principal purposes of the study are to investigate shore protection/flood control and water quality problems attributed to natural and man-made conditions. The study will determine the effects of those conditions on man's activities in the coastal environment in an effort to reduce damages, improve coastal planning and engineering, reduce maintenance dredging of federal projects, improve water quality, and alleviate coastal erosion. Additionally, an understanding of nearshore and estuarine environments and physical processes will assist New Jersey in identifying sources and trajectories for noxious floatable debris and spills of pollutants.

Project sponsor recommendation

Fiscal year 1993 funds were used to initiate the feasibility study phase and the funds requested in fiscal year 1994 will be used to continue this effort. We, therefore, wish to support an FY '94 Budget appropriation of $490,000 for this project. The State of New Jersey Department of Environmental Protection and Energy has signed the feasibility study cost-share agreement for this project.

PLANNING ASSISTANCE

SECTION 22, P.L. 93–251, NEW JERSEY PLANNING ASSISTANCE (STUDY)

Fiscal year 1994 project sponsor recommendation $300,000

Project description

Section 22 of the Water Resources Development Act of 1974 provides authority for the Corps of Engineers to assist the states in preparation of comprehensive plans for the development, utilization a and conservation of water and related land resources. Assistance is provided on the basis of state requests, and eligibility is determined by the objectives of the state studies. Consequently, the state must have a planning program either underway or characterized in sufficient detail so that the validity of its request may be appraised. In addition, only that assistance which can be undertaken by Corps personnel may be provided.

In accordance with P.L. 99–662, state allotments from the nationwide appropriation are limited to $300,000 annually, but may be less depending upon the needs of individual states. The program may encompass many types of studies including water supply, water quality, water conservation, hydropower development, flood control, erosion and navigation. Typical studies are at a reconnaissance level of detail.

PROJECT SPONSOR RECOMMENDATION

This project was established to provide planning assistance to states. Funds requested are to be utilized by the Corps of Engineers to perform engineering evaluations of water resource problems within the State of New Jersey.

This planning program has provided meaningful levels of funding for which New Jersey is most appreciative. However, there are several planning projects for which we wish to request funds in FY '94 through this program. The total funds requested for these proposed studies is $300,000 and the State of New Jersey is prepared to financially participate as may be necessary to secure these funds.

MARITIME ADVISORY COUNCIL AFFILIATE ORGANIZATIONS

Bridgeton Municipal Port Authority
Delaware River and Bay Authority
Delaware River Port Authority
International Union of Operating Engineers
Joint Executive Committee for the Improvement of the Delaware
Marine Trades Association of New Jersey
Maritime Association of the Port of New York/New Jersey
New Jersey Alliance for Action
New Jersey Chapter—National Dredging Association
New Jersey Marine Sciences Consortium
New Jersey State Chamber of Commerce
New Jersey State Commissioners of Pilotage
PENJERDEL Council
Perth Amboy Waterfront Committee
Port Authority of New York and New Jersey
Ports of Philadelphia Maritime Exchange
South Jersey Port Corporation
The Pilots Association for the Bay and River Delaware
Towboat and Harbor Carriers Conference, AWO (American Waterways Organizations)
United New York and New Jersey Sandy Hook Pilots Association

NEW YORK/NEW JERSEY PORT ISSUES

STATEMENT OF JOSEPH J. BIRGELES, MANAGER, EXTERNAL AFFAIRS, PORT DEPARTMENT, PORT AUTHORITY OF NEW YORK AND NEW JERSEY

Senator JOHNSTON. Now we are ready for the Port Authority of New Jersey and New York, with Mr. Chris Ward.

Mr. BIRGELES. Good afternoon, Mr. Chairman. My name is Joseph J. Birgeles. I am manager of external affairs for the port department of the Port Authority of New York and New Jersey.

Joining me are Chris Ward, from the city of New York; and Joe Grossi, who testifies five or six times a day, representing the State of New Jersey. [Laughter.]

I would like to submit our testimony for the record. And on behalf of the 32 civic, trade, labor, and governmental interests listed on the cover of our statement, we request that sufficient Federal funds be appropriated in fiscal year 1994 for the design, construction, and maintenance of essential navigation projects in the Port of New York and New Jersey under the Corps of Engineers civil works projects.

Of the 10 projects, plus operations and maintenance in our statement, I would like to address about 4 other projects.

KILL VAN KULL, NEWARK BAY CHANNELS, NEW JERSEY

One is the Kill Van Kull, Newark Bay channels. It is a major deepening project which is now ahead of schedule. We thank you for your prior appropriations and request now that $28.5 million be appropriated in fiscal year 1994 to maintain the construction schedules. We hope to have construction completed in early 1995. For your information, we have requested that the Corps of Engineers develop project cost estimates to deepen the channel to its authorized 45-foot depth. We did this in a two-phase project.

DREDGE MATERIAL DECONTAMINATION STUDY

Section 401 of the Water Resources Act of 1992 authorizes $5 million per year for exploring sediment decontamination projects for dredge material. With our and other ports recent problems in securing dredging permits, we urgently request that you appropriate $5 million so we can continue this program for all the ports' use before a national port dredging problem develops.

NEW YORK BIGHT AND NEW YORK HARBOR ENVIRONMENTAL STUDY

The New York Bight and Harbor study, section 326 of the Water Resources Act of 1992 authorized $1 million to study the movement and sediment transportation of pollution in the harbor. However, we request that this be increased to $3 million and that $3 million be appropriated to advance the study to assist us in our dredging and our disposal of dredge material.

RARITAN BAY ANCHORAGES, NEW YORK AND NEW JERSEY

The last project I would to speak on is the Raritan Bay anchorages. We have requested $200,000 be appropriated for a reconnaissance study to determine the feasibility of constructing an anchorage area in the Sandy Hood Channel to reduce congestion in the present port anchorage areas.

Thank you, Mr. Chairman. I will now ask Joe Grossi to continue with our testimony.

STATEMENT OF JOSEPH GROSSI, NEW JERSEY MARITIME ADVISORY COUNCIL

Mr. GROSSI. Mr. Chairman, there are three navigation projects in the Port Authority of New York and New Jersey bistate district that I will speak to.

ARTHUR KILL EXTENSION, HOWLAND HOOK TO CARTERET, NJ AND NY

The first is the Arthur Kill Channel extension to Carteret. The existing 35-foot-deep Federal channel cannot accommodate today's modern deep-draft vessels. We support a fiscal year 1994 budget appropriation of $400,000 to fund the combined feasibility, preconstruction, engineering, and design phase of this study.

NEW YORK HARBOR AND ADJACENT CHANNELS, CLAREMONT CHANNEL, NJ

The next project is the Claremont Channel and it is presently a non-Federal channel with an average depth of 27 feet. While it is authorized for construction to a depth of 42 feet, the modified project will provide adequate shipping economies with a 34-foot-deep channel. We wish to request that $500,000 be appropriated in fiscal year 1994 to continue the preconstruction, engineering and design phase.

PORT JERSEY CHANNEL

The third project, Port Jersey Channel, serves 12 shipping lines at the Global Marine Terminal. In 1991, this facility handled over

400 vessels. As a privately owned terminal, Global pays nearly $4 million in Federal, State, and local taxes annually. We respectfully request that $3 million be appropriated in fiscal year 1994 to advance the construction start for this much needed channel improvement.

With regard to the above three projects, the Port Authority of New York and New Jersey and the State of New Jersey are developing an agreement for the port authority to act on behalf of the State on a number of commercial navigation projects. It has come to our attention that the Corps may not have included funding in its budget request for fiscal year 1994 due to its belief that this agreement has not been finalized. We want to assure you that this agreement will be concluded shortly and that funding for the Arthur Kill extension to Carteret feasibility study, Claremont Channel and Port Jersey Channel construction should be included in fiscal year 1994.

I will now defer to Mr. Chris Ward.

STATEMENT OF CHRIS WARD, REPRESENTING NEW YORK CITY ECONOMIC DEVELOPMENT CORP.

Mr. WARD. Thank you. Thank you, Mr. Chairman. I am Chris Ward from the New York City Economic Development Corp. I am here to talk on the three projects associated with the New York City side of the harbor.

NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT

The first project is harbor drift. The harbor drift project remove sunken hulks and decaying shore structures that are dangerous and costly to the harbor. It has been estimated that the harbor drift has caused approximately $53 million in damage to vessels within our port. We are here today requesting $3.9 million for this critical work. It is to address the problem in the Brooklyn Reach, as well as continue construction in the Bayonne and Shooters Island Reaches, and the Weehawken-Edgewater Reach. We believe that this modest sum of $3.9 million will continue to allow us to work on this important project.

HOWLAND HOOK TERMINAL, NJ

The second project I would like to speak very quickly to is the Arthur Kill/Howland Hook Terminal. We are requesting approximately $500,000 be appropriated to resume preconstruction, engineering, and design work. This is design work for enhancement of our Howland Hook project, an ambitious intermodal facility developed with the Port Authority of New York. They have located and identified a tenant series and we would like this work to move forward to allow the New York City side of this project to move forward.

RED HOOK FLATS ANCHORAGE, NJ

The last and final project is the Red Hook Flats anchorage. Again, we are looking for approximately $200,000 to commence a feasibility study to look at expanding the anchorage. As you know, the anchorage was designed at a time when vessels were much smaller than they are today. This feasibility study will look at the opportunities for expanding that anchorage to allow the larger vessels of today, which bring much of the economic activity to our port, to continue to grow. Again, the $200,000 will allow us to look at expanding that work.

Finally, under the category of operations and maintenance, the past administration's appropriation recommendations have been satisfactory. I realize there are some constraints, but we would like, if possible, to request an opportunity to make our recommendations known to this committee should that need arise at a later date.

And on behalf of the port authority, and New Jersey and New York State, and the city of New York, I would like to thank you for your time.

Senator JOHNSTON. How long will it take you to clear out the drift from the harbor? The wrecks in the drift?

Mr. WARD. This is a project—for the ones that I have identified, which will be an approximately 3- to 5-year project. There is much more work still to be done, but the appropriations for this project are on the 3- to 5-year basis.

Senator JOHNSTON. Thank you very much. We have a vote on, so I will go vote and come back. Thank you.

[A brief recess was taken.]

[The statements follow:]

JOINT STATEMENT OF LILIAN C. LIBURDI AND BARBARA MCCONNELL

ENDORSED BY

Bayonne Chamber of Commerce (NJ)
Board of Commissioners of Pilotage of the State of New Jersey
Brooklyn Chamber of Commerce (NY)
Chamber of Commerce of the Borough of Queens (NY)
City of Jersey City, Department of Housing and Economic Development
City of Newark, Department of Engineering (NJ)
Commerce and Industry Association of New Jersey
Downtown Brooklyn Development Association (NY)
Hudson County Chamber of Commerce and Industry (NJ)
International Longshoremen's Association
Local 25—International Union of Operating Engineers
Local 333—United Marine, Division
Maritime Advisory Council of New Jersey
Maritime Association of the Port of New York and New Jersey
Maritime Port Council of Greater New York and Vicinity
Metro Newark Chamber of Commerce (NJ)
New Jersey Alliance for Action
New Jersey State Chamber of Commerce
New York Board of Trade
New York Chamber of Commerce and Industry
New York-New Jersey Port Promotion Association
New York Shipping Association, Inc.
Save Our Port
Staten Island Chamber of Commerce (NY)
Towboat and Harbor Carriers Conference, AWO
Union County Chamber of Commerce (NJ)
Union County Planning Board (NJ)
United New Jersey Sandy Hook Pilots Benevolent Association
United New York Sandy Hook Pilots Benevolent Association

I am Lillian C. Liburdi, Director, Port Department of The Port Authority of New York and New Jersey. Joining me are Barbara McConnell, Commissioner of Commerce and Economic Development, the State of New Jersey and Chris Ward, Senior Vice President, New York City Economic Development Corporation. On behalf of the civic, trade, labor ad governmental interests listed on the cover of our statement, we request that sufficient federal funds be appropriate in fiscal 1994 for the design, construction and maintenance of essential navigation projects in the Port of New York and New Jersey under the U.S. Army Corps of Engineers' Civil Works program. We thank you, Mr. Chairman, and distinguished members of the subcommittee for affording us time to make our funding needs known to you.

The request we make for funds for the Port of New York and New Jersey is not a casual one. Although the federal budget recommendations are not available, the sums we ask for are what we believe is necessary to continue and advance existing construction navigation projects and provide for much needed studies. We and the other local sponsors are prepared to provide the local share of funds as required. Port interests recommend a appropriation of $45.2 million in federal funds for fiscal year 1994 allocated among construction and studies for navigation projects.

	Port recommendation
Construction:	
Kill Van Kull and Newark Bay Channels, NY and NJ	$28,500,000
New York Harbor collection, removal of drift, NY and NJ	3,900,000
New York Harbor and Adjacent Channels (Port Jersey Channel), NJ	3,000,000
Study:	
New York Harbor and Adjacent Channels (Claremont Channel), NJ	500,000
Red Hook Flats Anchorage, NY	200,000
Raritan Bay Anchorages, NJ	200,000
New York and New Jersey Channels, Arthur Kill Channel, Howlad Hook Marine Terminal, NY	400,000
New York and New Jersey Channels, Arthur Kill Extension, Howland Hook to Carteret, NJ and NY	500,000
Sec. 405, Demonstration Project, WRDA 1992	5,000,000
Sec. 326, New York Bight and Harbor Study, WRDA 1992	3,000,000
Total	45,200,000

Kill Van Kull and Newark Bay channels, NY and NJ

Kill Van Kull and Newark Bay Channels, NY and NJ is a harbor deepening project authorized for construction in the Fiscal Year 1985 Supplemental Appropriations Act (Public Law 99–88) and The Water Resources Development Act of 1986. Local cooperation is being provided by The Port Authority of New York and New Jersey of which the estimated non-federal cost is $121 million for this project.

With the deepening of the channels from 35 to 40 feet three quarters complete, the Corps of Engineers is moving towards completion of the major rock removal through blasting contract. The construction contracts still outstanding to deepen the channel to 40 feet are a small rock removal and a clean-up contract. As we near completion of Phase I of this project, the deepening of the channel to 40 feet, we have asked the Corps of Engineers to develop the cost for Phase II of the authorized project, that is deepening the channel to 45 feet. Mr. Chairman, based on our understanding of the project and schedule, we request that $28.5 million be appropriated in Federal fiscal year 94 to maintain continuity of construction and meet the schedule date of early Federal fiscal year 1995 for Phase I completion and commencement of Phase II.

Section 405, demonstration project, WRDA 1992

Water Resources Development Act of 1992, Section 405. Decontamination Demonstration Project authorizes $5.0 million per year for exploring methods of sediment decontamination and its practical use in managing dredged materials that are contaminated. The demonstration project is essential to the maintenance of the port's navigational channels and can serve as a model for use in other locations in the country. Moreover, we have been working with environmental organizations in our region to promote this worthwhile work. Therefore, we urgently request that $5.0 million be appropriated to continue this most vital program.

Section 326, New York Bight and Harbor study, WRDA 1992

The Water Resources Development Act of 1992, Section 326, New York Bight and Harbor Study authorizes $1.0 million to provide data on movement and sources of water and sediment pollution. We and a coalition of regional environmental organizations testified before the House and Senate Subcommittees on the Water Resources Act and sought funding in the amount of $3.0 million each year for two years. This project can be completed in two years at an estimated cost of $6.0 million and is urgently needed to ensure the proper management of dredged material and its disposal which is essential to the maintenance of the port's navigation projects. Therefore, we request $3.0 million be appropriated to advance the schedule for completion and provide this much needed tool for understanding sediment contaminant loadings for the management and disposal of dredged material from the New York/New Jersey Harbor. Also, we will seek language modifications to authorize its usage, because the Port cannot wait six years for the study's completion.

Raritan Bay anchorages, New York and New Jersey channels project, NY and NJ

Raritan Bay anchorages. NY and NJ, are part of the New York and New Jersey Channels Project, and includes two anchorage areas (Perth Amboy and Sandy Hook). However, the latter was never constructed. The authorized depths of these anchorages range from 25 to 38 feet deep. However, today's commercial vessels cannot be accommodated properly, because they are longer and many have drafts exceeding 40 feet. This existing condition decreases the actual number of vessels able to safely use the anchorage.

We request an appropriation of $200,000 for a reconnaissance study to determine the feasibility of constructing a Sandy Hook anchorage or additional anchorages to accommodate today's modern cargo ships and thereby reduce congestion and risk of collisions and groundings.

STATEMENT OF BARBARA MCCONNELL

Mr. Chairman and distinguished members of the subcommittee, I am Barbara McConnell, Commissioner of New Jersey's Department of Commerce and Economic Development. In that capacity, I also serve as Honorary Chairman of the Department's Maritime Advisory Council.

New York Harbor and adjacent channels (Port Jersey Channel), NJ

The Port Jersey Channel in Bayonne, New Jersey presently serves 12 shipping lines at Global Terminal. This facility handles annually over 400 vessel arrivals with approximately 200,000 twenty-foot unit containers. More than 300 terminal employees with an annual payroll of $21 million, as well as another 120 contract workers, depend on this facility for their livelihood. As a privately owned terminal Global pays over $4.0 million in federal, state and local taxes annually. In addition, the channel also provides access for the U.S. Military Ocean Terminal and the Port Authority Auto Marine Terminal. This improvement was authorized for construction by the Water Resources Development Act of 1986.

We request $3.0 million be appropriated for this project to complete the General Design Memorandum and begin construction of the channel to a modified project depth of 41 feet below mean water in late federal fiscal year 1994. The State of New Jersey supports this project and is participating with the Corps of Engineers in developing the Local Cooperating Agreement necessary to advace construction. The Port Authority of New York and New Jersey is prepared to be the local cooperating agent on behalf of the state of New Jersey.

New York Harbor and adjacent channels (Claremont Channel), NJ

Located on the Hudson River in New Jersey, Claremont Channel is a non-federal channel with an average depth of 27 feet mean low water. A project to deepen Claremont Channel to 42 feet mean low water was authorized for construction in the Water Resources Development Act of 1986. Although authorized to 42 feet, the modified project will provide adequate shipping economies with a 34 foot channel.

Two scrap metal exporting companies and a crushed stone aggregate terminal are the major users of this channel. The scrap metal exports have average over 600,000 long tons per year and is by far our region's number one export. Meanwhile the crushed stone transshipments approach 4 million tons annually. Combined, these three firms employ 300 persons directly and nearly 3,000 indirect jobs through suppliers, truckers and longshoremen. We request that $500,000 be appropriated for preconstruction engineering design work for improvements to the Claremont Channel. In addition, the State of New Jersey supports this project and has expressed an intent to fund the non-federal share.

New York and New Jersey channels, Arthur Kill Extension, Howland Hook to Carteret, NJ and NY

The Water Resources Development Act of 1986, Section 202(b) authorized the Arthur Kill Extension, Howland Hook to Carteret, NY and NJ. The existing federal project's draft of 35 feet below mean water is inadequate and cannot accommodate today's deep draft vessels. These modern vessels must "lighter" in anchorage areas or make ocean voyages light loaded.

To provide for an expedited program, we request an appropriation of $400,000 to initiate combined feasibility and PED for this important navigation channel to improve safety of navigation and shipping economies. The State of New Jersey supports this project and has expressed an intent to fund the non-federal share of the feasibility study. The Port Authority of New York and New Jersey is prepared to be the local cooperating agent on behalf of the State for this study.

STATEMENT OF CHRIS WARD

New York Harbor collection and removal of drift, NY and NJ

Mr. Chairman, I am Chris Ward, Senior Vice President, New York City Economic Development Corporation. The New York Harbor and Collection of Drift Project, NY and NJ removes sunken hulks and decaying shore structures that are the sources of dangerous and costly harbor drift which also fouls our beaches. The Corps of Engineers has estimated that nearly 18,000 commercial, public and recreation vessels collide annually with drift in our port causing damage to propellers, shafts and hulls. The annual associated repair costs and other economic losses average greater than $53 million. This project was authorized under the Water Resource Act of 1974, Water Resources Development Act of 1976, The Supplemental Appropriations Act of 1987 and the Water Resources Act of 1988 with an annual authorization of $6.0 million.

We are here today requesting $3.9 million for this critical project. These funds are to be used to continue construction along the Brooklyn II Reach on the New York side where there is very serious structural deterioration of many of the pier structures. In addition, the funds would also be used to continue construction of the remaining work in the Weehawken-Edgewater Reach, initiate construction in Bayonne and Shooters Island reaches, undertake removal of four derelict barges in the Passaic River, and to continue the engineering and design of Kill Van Kull, Arthur Kill, NY and NJ reaches. Mr. Chairman, there is much needed work that has to be accomplished and we respectfully request a modest appropriation of $3.9 million.

New York and New Jersey channels, Arthur Kill Channel, Howland Hook Marine Terminal, NY

The Arthur Kill Channel, Howland Hook Marine Terminal project was authorized by the Water Resources Development Act of 1986. The channel improvement includes deepening the existing 35 foot channel to 41 feet from its confluence with the Kill Van Kull Channel to the Howland Hook Marine terminal and selected widenings and realignments of the channel for safety. The Port Authority has reached agreement with Ceres Terminals, Inc. and is about to enter into a long-term lease of the Howland Hook Marine Terminal. The Port Authority is committed to invest $25 million to enhance this terminal. We respectfully request that $500,000 be appropriated to resume preconstruction engineering and design as authorized in the Water Resources Development Act of 1992, Section 329.

Red Hook Flats anchorage, New York Harbor and adjacent channels project, NY

The Red Hook Flats Anchorage, NY is part of the New York Harbor and Adjacent Channels project. It was constructed to accommodate ocean going cargo ships and tankers. There is no additional capacity within this anchorage to accommodate today's modern vessels. The anchorage was designed by the Corps of Engineers in the early 1960's for a vessel averaging 525 feet in overall length and with a draft of 30 feet. Today's modern ships are almost 1,000 feet long with drafts of 40 feet or greater, therefore requiring additional space and depth beyond that allowed for in the original anchorage design.

Therefore, to provide safe navigation and maintain our bi-state port's capability to accommodate today's vessels, we urgently request that $200,000 be appropriated to commence a feasibility study for the deepening of Red Hook Flats. The Corps has the Authority to undertake this study under a Congressional resolution adopted by the Senate Committee on Environment and Public Works on December 5, 1980.

OPERATIONS AND MAINTENANCE

Under the category of Operation and Maintenance, the past Administration's Budget recommendations have been satisfactory for the maintenance of the Port of New York and New Jersey federal channel system and has allowed the Port to continue to contribute nearly $20 billion to the regional economy. Once the federal Budget recommendations are available to the public, we would request the opportunity to make our recommendations known to the Committee should the need arise.

On behalf of Mrs. Liburdi, Commissioner McConnell and myself, we thank you for the courtesy of presenting our recommendations to the Committee. We will be please to try to answer any questions you may have.

ANIMAS-LA PLATA AND DOLORES PROJECTS

STATEMENT OF HON. BEN NIGHTHORSE CAMPBELL, U.S. SENATOR FROM COLORADO

Senator JOHNSTON. The subcommittee will come to order. We are very pleased to have my distinguished colleague, Ben Nighthorse Campbell, here before the committee.

And Ben, we are delighted to hear whatever you have to say, and I am sure we will accommodate to what you want.

Senator CAMPBELL. Thank you, Mr. Chairman. Pardon me for croaking through this. I am recovering from the flu.

I would like to introduce our panel here. First of all, my replacement on the House side, Congressman Scott McInnis, who is now representing the Third Congressional District of Colorado, who served in the State legislature with me 10 years ago, and has been a close personal friend ever since, and has been a supporter of the Animas-La Plata throughout his career in the State legislature, too.

In addition to that, Judy Knight, to my right, who is the chairwoman of the Ute Mountain Ute tribe; and Leonard Burch, who is two scouts left, the chairman of the Southern Ute Tribe, where I live in Colorado.

Mr. Fred Kroeger, on the end, has been involved with us for about the last 40 years and is probably one of the most knowledgeable people in Colorado about the Animas-La Plata project. And appearing with him are Mr. Peter Evans, to my right; and Mr. Randy Kirkpatrick, down here to the left.

Mr. Chairman, I am sure you are well aware of the Animas-La Plata, having dealt with appropriations for it in the last 5 or 6 years. I want you to know how important it is to not only the States of Colorado and New Mexico, but all the entities that signed a reasonable and contractual agreement some years ago to find a way to share the water rather than fighting it out in courts.

The Ute Indians, Southern Utes, and the Ute Mountain Utes, have waited very, very patiently, in fact, for decades, for fresh, clean water for their reservations. This project helps satisfy the claim they have made on 26 rivers. It is our understanding that we are going to be a little bit behind because there have been some lawsuits, as you know, brought about by the environmental community. We have tried to work with them to find solutions to Endangered Species Act and a number of other problems that they have had with the Animas-La Plata.

It has been a little bit of a two steps forward and one step back, but in that negotiated agreement that we did sign a few years ago, we were supposed to have this project done by the year 2000. At the rate it is going, with the kind of continual roadblocks that have been thrown up in front of us, we are going to be lucky to finish that project if we do not get full funding each and ever year for it.

FUNDING REQUEST

The administration has recommended $7 million this year, as you probably know, and we certainly support full funding for it.

And with that, I do not want to take all the time, Mr. Chairman, but do appreciate your sensitivity to this project.

PREPARED STATEMENT OF SENATOR HANK BROWN

Senator JOHNSTON. I have a statement from Senator Brown which I place in the record at this point.

[The statement follows:]

STATEMENT OF SENATOR HANK BROWN

Mr. Chairman. It is my pleasure to appear here today to lend my support efforts of the Southern Ute and Ute Mountain Ute Indian Tribes to seek completion of the Colorado Ute Indian Water Rights Settlement Act of 1988.

The Tribes ask the Committee to consider the Administration's recommendation for implementing the settlement, including the Animas-La Plata project. The construction of the Animas-La Plata project bring the federal government closer to its commitment to the states of Colorado and New Mexico under the Colorado River Storage Project Act. It enables the U.S. to fulfill a century-old obligation to Colorado Ute tribes.

The process of settlement has been a long and arduous one—from the more than two years of negotiations to reach the Colorado Ute Indian Water Rights Settlement Agreement to the passage of the Act two years later and finally, to the resolution of other unforeseen obstacles.

What kept supporters from throwing up their hands in frustration during this process, I believe, was a common belief that the U.S. would honor its commitments. We have a commitment—a trust responsibility—to the Colorado Ute Tribes. These tribes negotiated in good faith and have been willing to make significant concessions long after the Colorado Ute Indian Water Rights Settlement Agreement was signed. The Tribes recognized that, while litigation might have led to quantification of their reserved water rights, litigation would have involved huge costs and also might not have provided the Tribes with industrial water to develop their natural resources. By virtue of the settlement, the Animas-La Plata Project will provide many benefits to the Tribes that they could not obtain through litigation—principally, a firm water supply for municipal and industrial purposes with favorable repayment terms. The Tribes and the Water Districts chose negotiation over litigation, because full-blown litigation could have led to the bitter divisiveness between Indians and non-Indians.

The 1988 Colorado Ute Settlement has been hailed as an example of the success achievable when the Tribes and state water communities cooperate. Failure to implement this settlement will send a clear message to other Tribes and States that this Congress is not willing to support these efforts. If the facilities to store and deliver the Tribal water are not completed by the turn of the century, expensive and unnecessary litigation could resume. In addition, the potential liability of the U.S. Government for failure to fulfill its commitments under the Cost Sharing Agreement and the Settlement Act could be hundreds of millions of dollars.

No one has suggested that other laws be ignored in an effort to implement the 1988 settlement. The fact is that no project has undergone such intense scrutiny as the Animas-La Plata Project. Beginning with initial authorization in 1968, through National Environmental Policy Act documents, Clean Water Act compliance, Endangered Species Act consultations, cost-sharing agreements, and the settlement negotiations and legislative debate, an immense record has been created on this Project. This record shows a solid commitment on the part of project proponents to comply with all federal laws. A similar commitment from the federal government to implement the 1988 settlement act is likewise necessary. This is an opportunity to show the Tribes the federal government's commitment.

The Tribes and the other Project beneficiaries are committed to mitigating adverse impacts stemming from the Animas-La Plata Project. With that commitment in mind, they worked for nearly two years to address concerns about the project's impacts on endangered species in the San Juan River Basin.

This project should rate a high priority within our budget fund in accord with the Administration's recommendation. The most cost effective alternative is to meet the federal government's responsibility to the Colorado Ute Tribes is now.

STATEMENT OF HON. SCOTT MCINNIS, U.S. REPRESENTATIVE FROM COLORADO

Senator JOHNSTON. Congressman.

Mr. MCINNIS. Thank you, Mr. Chairman. Mr. Chairman, this is my first time ever to sit in a U.S. Senate hearing room. In fact, I can remember years ago, as a young man, I hoped someday in my life I would be able to actually step into the Capitol, and certainly never expected to be in this position. So, I consider it a privilege to be able to appear in front of you today and appreciate your courtesies.

Senator JOHNSTON. Well, it is nice to have you here.

Mr. MCINNIS. Thank you, Mr. Chairman. Also, Mr. Chairman, I should let you know that it is a special honor for me, No. 1, to sit by my colleague, Senator Campbell. His absence is notice in the House and, obviously, I am not filling those big shoes, but I am trying. [Laughter.]

It is especially meaningful today, too, that we have had the guests of Senator Campbell, the leaders from the Indian tribes, and the members of the tribal council, to be here. This project is so critical. The Indian tribes, based on commitments and, of course, the Indian treaty and the Colorado Ute Indian Waters Rights Settlement in 1988, have not only gone out on a limb again on the promises of a treaty, but they brought with them representatives of the Colorado Governor's office, Mr. Kroeger and Mr. Maynes, who are longtime proponents and experts in this project.

So I appear before you today very humbly to tell you that the full funding for the Animas-La Plata project is very critical to our State. While we have run into some roadblocks, I think these roadblocks are being put forth by a small group of people who have in somewhat of a masterful way, determined how to use the laws and the newspapers and the press to stop this project.

I can assure the chairman, the committee and, of course, my good colleague, Senator Campbell, is aware that we have strong support in our State for this project, and we feel very committed to fulfill the obligations under that treaty.

So, Mr. Chairman, without going further, I would ask that you listen to some of our other guests from Colorado. And again, I thank you for the courtesy of being able to appear here today.

Senator JOHNSTON. Thank you. We are delighted to have you here today. And I know about Animas-La Plata. It has been around in this committee for a long time. We have supported it for a long time. And hearing your support for it, we want to make it happen.

Mr. MCINNIS. Thank you, Senator.

[The statement follows:]

STATEMENT OF CONGRESSMAN SCOTT MCINNIS

Mr. Chairman and members of the committee, thank you for the opportunity to appear before you today and discuss the Animas-La Plata Project. In this Committee's record of supporting water resource development in this country, the Animas-LaPlata Project must rank as one of the most worthy and most critically needed.

It is my pleasure today to join some of my constituents from southwestern Colorado—most are as well known to this Committee as to me—who have been loyally working for the continued funding and completion of this critical water project. The Colorado Ute Indian Water Rights Settlement Act passed by Congress in 1988 is a treaty with the Ute Indians. It stands as our promise that the federal government would be a partner to southwestern Colorado and northern New Mexico in this effort to share limited water resources. The Ute Indians hold some of the oldest water rights in the west, but even up to a year ago were still trucking water onto the reservation for their own consumption and use. This situation should have been remedied with the original Settlement Act and all the affected parties appearing before you this week are determined to stay with this project to its completion.

In fact, the project might have followed its scheduled plan for completion and we would not be here today, but for toilsome delays caused primarily by bureaucratic and administrative roadblocks, including some challenges presented by the same legislation which was designed to protect these lands and peoples—for example, the Endangered Species Act. Also, NEPA requirements must be met by updating information and planning for additional mitigation. While all who support the project agree that compliance with the Act and all necessary environmental impact studies, this clearance process has still resulted in real construction repeatedly being postponed. One solution is being presented by the Ute Indian witnesses today—the establishment of an Interagency Cooperative Agreement.

The parties to the 1988 Settlement have asked Interior Secretary Bruce Babbitt to take the lead in developing an interagency working agreement to permit the project and environmental compliance to go forward concurrently. These individuals have proven by their cooperative approach to the endangered species issues of the past that they can be relied upon to address and meet all legal requirements. They, in turn, have the right to ask and expect the federal government to fulfill its promise to the Ute Mountain people, including our trust responsibilities.

In recent hearings held by the House Natural Resources Committee, I asked Secretary Babbitt his views on Animas-LaPlata and his response was positive. This dialogue was reported by the Durango Herald this month and I request that copies of those articles as well as an editorial from that paper be included in the Hearing Record at the end of my statement.

We are informed that the Administration's fiscal year 1994 budget includes $7 million for the Animas-LaPlata Project. On behalf of all of us here today, and all the people of southwestern Colorado and northern New Mexico, whose economies and cultures depend on an adequate supply of water, I urge you to support that level of funding.

We will need to work together; this Committee, the Ute Mountain Tribe, and the Colorado delegation; with Secretary Babbitt, the Environmental Protection Agency, and the Corps of Engineers to enact this interagency cooperative agreement. If this can be agreed to prior to your mark-up of the fiscal year 1994 Appropriations, I respectfully request that you consider additional funding for the project so that the promise that it will be built by the year 2000—as stated in the Settlement Act—will not be broken and can be fulfilled.

Thank you.

Senator CAMPBELL. Thank you, Mr. Chairman. Would anybody else like to make a statement?

Judy.

STATEMENT OF JUDY KNIGHT-FRANK, CHAIRWOMAN, UTE MOUNTAIN UTE TRIBE

Ms. KNIGHT-FRANK. Thank you for this opportunity to come before you. And I am Judy Knight-Frank, chairwoman of the Ute Mountain Ute Tribe. We are a party to the negotiated agreement, the Colorado Ute settlement that was signed in 1988.

Through that settlement, we did get some water for my portion of the reservation, but I have another portion that is in dire need of water, as you know if you are familiar with the area. And we have been working on getting water to our reservation for over 100 years and we are still here doing this.

I would ask this committee to continue to support our project. It needs to be completed. We did go into the negotiations. We made a full commitment, and we would like to see the project completed so that our water rights can be settled.

And I thank you for the time to let me speak today.

STATEMENT OF LEONARD BURCH, CHAIRMAN, SOUTHERN UTE TRIBE

Mr. BURCH. Mr. Chairman, my name is Leonard Burch. I have with me Howard Richards, who is a member of the Southern Ute Tribal Council, in the audience.

However, I would like to thank this committee for their support in the past and we hope that we can continue with your support, because it is the commitment that the two Ute tribes made with their non-Indian neighbors in our homelands in southwest Colorado and northwest New Mexico. It is two-way—the States of Colorado and New Mexico and the two Indian tribes working together with our non-Indian neighbors.

Some of the opponents of this project have tried to divide us in the sense of making it an all-Indian project, but we are committed that we want to work together in the area of cooperation, and some of the opponents have now filed a lawsuit against the Bureau of Reclamation of certain environmental groups.

However, we are maintaining that we can continue to cooperate and take care of these concerns that have been placed before us.

So, Mr. Chairman, I urge you and this committee for the continued support in the appropriation of the President's budget of $7 million for the construction of this project. Thank you.

[The statement follows:]

STATEMENT OF LEONARD C. BURCH

Mr. Chairman and members of the committee, we, Leonard C. Burch, Chairman, and Howard D. Richards, Member, Tribal Council, of the Southern Ute Indian Tribe of Ignacio, Colorado, on behalf of the members of our Tribe, request your consideration of the funding needed to construct the Animas-La Plata Project on a schedule to meet the federal government's commitment under the 1988 Colorado Ute Indian Water Rights Settlement Act. We urge your Committee to approve the President's $7 million request for the Animas-La Plata Project for fiscal year 1994.

Both our statement and those of our Tribe's non-Indian friends and neighbors in southwestern Colorado and northwestern New Mexico will emphasize a theme of success through cooperation and compromise. The Ute Tribes wisely took the path of negotiation rather than litigation to resolve our reserved water rights. In a region that has become a national recreation area, the potential long-term economic consequences to Colorado citizens—which would have resulted from our successful litigation of our water rights claims—would have exceeded the estimated cost of the Animas-La Plata Project many times over. By negotiating a settlement, we have avoided not only the huge costs of litigation, but we have also avoided the bitter fights and social upheaval that have occurred in other regions, such as the Wind River Indian Reservation in Wyoming.

The Southern Ute Indian Tribal Council unanimously approved the Cost Sharing Agreement for the Animas-La Plata Project and the Colorado Ute Indian Water Rights Settlement Agreement in 1986. Both Ute tribes have already received extensive benefits as a result of those agreements: a $6 million domestic pipeline to Towaoc for the Ute Mountain Utes, $60 million in tribal development funds for both Tribes and quantification of our water rights on all other streams that cross the Indian reservations. In order to fulfill federal commitments made to the two Colorado Ute Indian Tribes in 1988, the Bureau of Reclamation must move forward with the construction of the Animas-La Plata Project.

The benefits of the Animas-La Plata Project far outweigh the costs. Through delay, delay, delay, the Sierra Club hopes to focus attention on the costs of the Animas-La Plata Project. Mr. Chairman, it is the benefits of the Animas-La Plata Project that should be foremost in our consideration. The settlement of our reserved water rights claims is well worth the cost of two or three Animas-La Plata projects. The annual benefits to our area will exceed $42 million per year.

In addition, construction of the Animas-La Plata Project now offers the best hope for the recovery of the Colorado squawfish and the razorback sucker in the San Juan River. Unfortunately, the Sierra Club and other environmental organizations, which were invited to participate in the process of establishing a recovery implementation program designed to recover these endangered fish, refused to join in that effort.

The United States Congress and State of Colorado have appropriated the Tribal Development Funds required by the 1988 Settlement Act. The Southern Ute Indian Tribe has already filed a Tribal Investment Plan with the Secretary of the Interior to use a portion of those Tribal Development Funds and has the created a tribally-owned enterprise, Red Willow Production Company. This tribal enterprise will allow the Tribe to become an active participant in the production of the natural gas resources on the Southern Ute Indian Reservation and will further the much needed economic development of the Southern Ute Indian Tribe.

On December 19,1991, the District Court, Water Division 7, State of Colorado, entered final decrees in our water rights cases pursuant to the Settlement Act, which means that our water rights, and those of the Ute Mountain Utes, have been quantified and recognized by the State of Colorado through its water courts. The settlement of our claims on the Animas and La Plata Rivers simply awaits the final step of the construction of the Animas-La Plata Project.

The Tribe is now facing one more hurdle to the construction of the Animas-La Plata Project: the lawsuit filed last year against the Bureau of Reclamation by the Sierra Club and a few local environmental organizations. The attorney for the Sierra Club has admitted that the object of the lawsuit is to delay further the construction of the Animas-La Plata Project. This lawsuit represents another example of the refusal of environmental groups to participate with the Indian and non-Indian water users in southwestern Colorado to make the Animas-La Plata Project a success.

Project opponents pay lip service to our settlement agreement and suggest we seek an alternative water project to benefit only Indians. There is no alternative to the Settlement Agreement. The Settlement Agreement requires that the Animas-La Plata Project be built.

The Sierra Club has suggested that Ute leaders do not understand what is good for our people. This suggestion is insulting and paternalistic. The Sierra Club wants the federal government to once again break the trust and treaties with the Indians. The Sierra Club and other detractors of the Animas-Plata Project have suggested giving us money instead of water to settle our water rights claims. This approach is simply not acceptable to the Southern Ute people. History has taught us a painful lesson. In 1868, the Ute bands of Indians owned at least one-third of the western slope of the state of Colorado. By various treaties, agreements, and federal legislation, Ute ownership of lands in Colorado was reduced to a strip of land in southwestern Colorado 15 miles wide and 140 miles long. Ute land holdings were further reduced at the turn of the century when the United States Government, without the consent of the Tribes, opened up the lands to homesteading. In 1954, following years of litigation, the United States paid the Ute Tribes for the unlawful taking of our lands in western Colorado. The $32 million lump sum payment represents only a small fraction of the value of the lands and the resources permanently lost to the Ute people. We are unwilling to repeat the mistakes of the past in regard to our water. With regard to our reserved water rights claims, we, therefore, negotiated for water instead of money.

The bottom line is that the United States Congress and the President of the United States promised the Southern Ute and Ute Mountain Ute Indian Tribes that the Animas-La Plata Project would be constructed as part of the settlement of our reserved water rights claims. The Southern Ute Indian Tribe will not allow the United States Government to again break a treaty obligation to the Indian people. We are entitled to have the Animas-La Plata Project constructed as promised to provide the Tribe with "wet" water and not "paper" water rights.

On October 26,1991, the Ute Indian Tribes, together with the Bureau of Reclamation and local water users, held a ground breaking ceremony on the Animas-La Plata Project. We want to ensure that the ground breaking ceremony does not just represent another broken promise to Indian people. As Justice Black stated: "Great nations, like great men, must keep their word."

Whether considering the economics of the Project or the issue of social justice, the Animas-La Plata Project deserves to be constructed without further delay. We ask for your continued support of this vital Project.

STATEMENT OF RANDY KIRKPATRICK, BOARD MEMBER, SAN JUAN WATER COMMISSION

Mr. KIRKPATRICK. Mr. Chairman, I come from the San Juan Water Commission representing the State of New Mexico. The main thing I would like to do is thank you for the past support.

And I would like to reiterate that this is not only an Indian project, it also serves the non-Indian residents of both New Mexico and Colorado.

In the case of New Mexico, we have communities currently who do not actually have sufficient water for domestic and industrial purposes to meet their current demands. So it will be benefiting them.

The other thing I would certainly press upon you is that the economic basis for both northwestern New Mexico and southwestern Colorado is linked together.

We would certainly appreciate your continued support for the full $7 million funding. Thank you.

STATEMENT OF FRED KROEGER, PRESIDENT, SOUTHWESTERN WATER CONSERVATION DISTRICT

Mr. KROEGER. Mr. Chairman, I am Fred Kroeger from southwestern Colorado. I am the president of the Southwestern Water Conservation Board. I think most of the comments that have been made, I will not attempt to repeat. And our statements have been submitted.

We do, however, find ourselves in a bureaucratic swamp, with the 1988 Indian Water Rights Settlement Act and the changes that have come about through the Fish and Wildlife Service and the EPA. We are in conflict on those two laws. We are attempting to have a cooperative agreement whereby we can comply with the environmental requirements, and we recognize that we must do this—we plan to do this, but, hopefully, we can also have some construction going on concurrently with that.

DOLORES PROJECT, COLORADO

I want to urge you to support the $20.3 million on the Dolores project. This essentially completes that project, a really shining example of what can happen under a reclamation project in our part of the State.

And also to support the $7 million that is in the President's budget for the Animas-La Plata.

We have a strong coalition, as Leonard has indicated, and again, thank you for your past and present support. We really do appreciate it.

[The statement follows:]

STATEMENT OF FRED V. KROEGER

Mr. Chairman and members of the committee, I am Fred V. Kroeger, President of the Board of Directors of the Southwestern Water Conservation District of Colorado. The Board of the District urges this Committee to again assist the Indian and non-Indian water users in southwestern Colorado and northwestern New Mexico by appropriating the Administration's request of the $7 million needed to further construction of the Animas-La Plata Project and the $20,336,000 needed to continue construction of the Dolores Project.

I have been a member of the Board of Directors of the Southwestern Water Conservation District for over 40 years. I was honored to serve on the Colorado Water Conservation Board for 21 years. I am, therefore, familiar with the water needs of Colorado.

The United States has spent over $500 million on the construction of the Dolores Project in the Four Corners region of Colorado. The Dolores Project is an integral part of the Indian Water Rights Settlement. Completion of the Dolores Project is in sight. The $20,336,000 Administration request for the Dolores Project will be used to finish Project outlet works, expand the gate at McPhee Dam, conclude power plant construction, continue with mitigation development, and ensure completion of the canal to deliver irrigation water to the Ute Mountain Ute Indian Tribe. Delivery of Dolores Project water has resulted in increased crop yields, elevated the economic capability for previously marginal dryland farmers, and promoted a tremendous growth in the economics of the Project area. The Dolores Project is a true success story.

The Animas-La Plata Project also exemplifies the best of the Bureau of Reclamation water resource development projects. Not only does the Animas-La Plata Project provide for the settlement of the Colorado Ute Indian Tribes' reserved water rights claims, the Project also provides needed agricultural water to the non-Indian communities of southwestern Colorado, a stable domestic supply of water for cities in Colorado and New Mexico, and vital economic development potential for the area through the creation of new jobs and a major recreational reservoir.

The Final Settlement Agreement, which quantifies the Southern Ute and Ute Mountain Ute Indian Tribes' Winters water rights claims, is an historic example of what can be accomplished through compromise and cooperation. The State of Colorado, the Ute Indian Tribes, the federal government, and the water users of southwestern Colorado and northwestern New Mexico all benefit from the construction of the Animas-La Plata Project. The Final Settlement Agreement will enable the two Ute Tribes to develop their agricultural, municipal and industrial potential on all the streams which cross their reservations in an orderly fashion with the certainty of a well-defined supply of water.

The quantification of the Tribes' Winters water rights claims also brings certainty to the non-Indian water users in southwestern Colorado. The Project will enable both Indian and non-Indian water users in southwestern Colorado to beneficially utilize their fair share of the waters of the Colorado River and its tributaries. The Project will allow the federal government to honor its commitments to the Indian people made in treaties and agreements which were signed over a hundred twenty years ago. All parties will avoid costly and divisive litigation over the nature and extent of the Tribe's reserved water rights claims. Finally, the state of Colorado will continue its tradition of cooperating with its Indian citizens for the mutual benefit of both the state and the Indian tribes.

We in southwestern Colorado are extremely proud that through cooperation and compromise we have overcome the many, many hurdles to the construction of the Animas-La Plate Project. We successfully fought in court to create the Animas-La Plata Water Conservancy District. We convinced the electors in San Juan County, New Mexico, and La Plata County, Colorado, of the benefits of the Animas-La Plata Project and received overwhelming public support at each of two elections. At the direction of this Committee and the United States Congress, we successfully negotiated an historic cost-sharing agreement with the Secretary of the Interior. We negotiated a fair and just settlement of the reserved water rights claims of the two Colorado Ute Indian tribes. We overcame the obstacle of the belated federal reversal of its position concerning the importance of the endangered fish in the San Juan River. After initially deciding in 1979 that the Animas-La Plata Project would not have a detrimental impact upon endangered fish species, the U.S. Fish and Wildlife Service in May of 1990 reversed its findings. After a year of negotiations, a reasonable and prudent alternative was developed to allow the Animas-Plata Project to go forward. An Endangered Fishes Recovery Implementation Program has been established to recover the endangered fish in the San Juan River and, at the same time, to allow water development to proceed.

In reviewing the history of the Animas-La Plata Project, Mr. Chairman, we note that both the United States Government and the state of Colorado have made strong commitments to proceed with construction of this extremely valuable water resource development project. Together with this Committee and the Congress, the last six Presidential administrations have appropriated funds to fulfill the promises embodied in the Settlement Agreement. Likewise, the Colorado General Assembly and the Governor of Colorado have committed $60 million to construct the Project. Although additional delays will raIse the Cost of the Animas-La Plata Project because of inflation, the benefits of the Colorado Ute Indian Water Rights Settlement Agreement will exceed the costs of the Animas-La Plata Project many times over.

As you know, we have requested that the Bureau of Reclamation, the Environmental Protection Agency and the Army Corps of Engineers enter into a Memorandum of Agreement to complete all environmental compliance for the Animas-La Plata Project concurrently with the Project's construction. This simultaneous approach will assist the U.S. Government in fulfilling its trust responsibilities while at the same time securing total compliance with all environmental laws. We ask this Committee to urge the Department of the Interior to endorse this common sense approach. If such a Memorandum of Agreement is executed, the Southwestern Water Conservation District requests that this Committee support additional fiscal year 1994 appropriations for the Animas-La Plata Project, in addition to the $7 million Administration request, to help ensure that the federal government meets its commitments under the 1988 Settlement Act.

The construction of the Animas-La Plata Project will change a fifty-year dream into reality. Through good times and bad, farmers, ranchers, cities, towns, Indians and non-Indians have stayed together and cooperated, even though at times that cooperation was painful. The dream is the ability of the people of southwestern Colorado to enjoy the beneficial use of the water resources of the Animas and La Plata Rivers. The reality will be the construction of the Animas-La Plata Project and a sufficient water supply for the San Juan Basin of southwestern Colorado and northwestern New Mexico.

We in southwestern Colorado and northwestern New Mexico are entitled to have our dream become a reality. Our entitlement comes as a result of the many compromises and sacrifices that we have made in times past when Congress was considering such legislation as the Colorado River Storage Act of 1956 and the Colorado River Basin Project Act of 1968. We have stood in line with our Indian friends for a long time, and we feel that we have now rightfully taken our place at the head of the line. The federal government must meet its commitment under the 1988 Settlement Act to construct the Animas-Plata Project.

STATEMENT OF PETER EVANS, DEPUTY DIRECTOR, COLORADO WATER CONSERVATION BOARD, ON BEHALF OF GOVERNOR ROMER

Mr. EVANS. Mr. Chairman, my name is Peter Evans. I am here on behalf of Governor Romer today. I would like to submit a set of written comments for your record. The Governor is fully supportive of this project, as is the Colorado Department of Natural Resources and the Colorado Water Conservation Board.

Colorado, too, is a party to the Indian Settlement Agreement; fully supported the Colorado Ute Water Rights Settlement Act of 1988. We are also committed to full mitigation of environmental impacts that have been identified, including the endangered species concerns which we feel have been reasonably addressed.

As you probably are aware, Colorado is also a participant in a multistate effort to try and recover those endangered fish in the Colorado River. In a similar manner, we are working cooperatively with the States, the Federal agencies, the tribes, the water users, and the environmental community to work these problems out in a way that does not require litigation, constant struggle, and internal division.

We feel these concerns have been addressed. We are willing to continue working to address any remaining concerns.

The State of Colorado does not think it would be a responsible act to delay the construction of this project any longer. This project is an essential component of both the settlement agreement and the settlement act, and stands squarely behind the timely completion of the project.

Thank you.

[The statement follows:]

STATEMENT OF PETER H. EVANS, ON BEHALF OF GOVERNOR ROMER

Mr. Chairman and distinguished members of the committee, this testimony is submitted on behalf of the Honorable Roy Romer, Governor of the State of Colorado; Mr. Kenneth Salazar, Executive Director of the Colorado Department of Natural Resources and Daries C. Lile, Director of the Colorado Water Conservation Board.

Summary of request

Colorado supports continued funding for projects for the Bureau of Reclamation, the Army Corps of Engineers, and the Colorado River Salinity Control Program.

We would particularly like to request that adequate funding be given for the following activities:

U.S. Bureau of Reclamation

Animas-La Plata Project.—The Project is a key element in the 1986 Colorado Ute Indian Settlement Act. The Project sponsors, the State of Colorado and the Bureau of Reclamation have been working diligently to insure that the project is constructed in a timely manner and in accordance with the time table as set forth in the final settlement agreement, state court decrees and federal legislation At the present time construction has been delayed while environmental and cultural resource issues are resolved.

The Project proponents have requested that the Secretary of the Interior facilitate an agency coordination committee comprised of the Bureau of Reclamation, the Environmental Protection Agency and the Army Corps of Engineers in an effort to resolve the environmental issues while allowing construction to proceed. We urge these agencies to work together and to act in a timely and responsible fashion to allow the federal government to live up to its responsibilities.

In using an approach that will allow for construction to proceed while addressing environmental problems, there will be a need for funds in addition to the $7,000,000 requested in the Administrations budget. We would ask that the Committee recognize the importance of the 1988 Ute Indian Settlement Act and authorize spending which will maintain the time schedule necessary to meet the commitments made to the Indian Tribes and the citizens of Southwest Colorado.

Dolores Project.—The Dolores project is nearing completion and we are supporting the Administrations request for $20,336,000 for 1994. In the upcoming year plans are to begin the construction of the Lone Pine Canal which will be the last major contract necessary to complete the project. This has been a very successful project and water has been supplied to irrigators, municipalities, recreational users, and the Ute Mountain Ute Indian Tribe. We thank you for you past support.

Fryingpan Arkansas Project.—A total of $4,372,000 is being requested by the Administration for the construction of the Mt. Elbert Pump Storage Power Plant, Operation and Maintenance and Reservoir Recreation Management. This too has been a extremely successful project which bas increased the water supplies to the Arkansas Basin for municipal, irrigation and recreational users. We support the present funding level and would like to thank you for the continued assistance on this essential project for Southeastern Colorado.

Closed Basin Project.—Colorado as well as the U.S. Government has an significant interest in completing the Closed Basin Project in the San Luis Valley. This project is requesting $390,000 in funding for final construction of Phase V, and $2,754,000 for operation and maintenace for FY 1994. We support this request and appreciate your past support.

Army Corps of Engineers

John Martin Dam and Reservoir—Trinidad Reservoir and all Flood Control Projects in Colorado.—We do not have at this time the requested amounts of funding for these projects. However, the continued operation and maintenance of these facilities is essential to the protection of the citizens of Colorado for flood control and the delivery of water to water users which they serve.

Colorado River Salinity Control Program

The Colorado River Salinity Control Program is an ongoing program within the Colorado River Basin which provides for the reduction of salt in the Colorado River system, which allows for the continued development of Colorado Compact entitlement and ensures that numeric salt load requirements to the Lower Basin States and the Republic of Mexico are not exceeded. This program saves millions of dollars annually for water users in the Southwest.

Funding in the amount of $72,028,000 Is being requested for FY 1994 by the Bureau of Reclamation and we fully support that request.

While we do not have the amounts requested by the U.S. Department of Agriculture and the Bureau of Land Management for the Salinity Control Program these agencies also have a vital role in the Program and we support their requests.

Colorado appreciates the committees' willingness to recognize the special needs of the West and the support which Congress and the Administration have given us. Thank you for this opportunity to present our views.

ADDITIONAL STATEMENT FOR THE RECORD

Senator CAMPBELL. Mr. Chairman, that completes our testimony. There is one other prepared statement that we have filed that I ask be made part of the record.

Senator JOHNSTON. Without objection, so ordered.

Thank you.

Congressman, thank you very much. I am glad to have this outstanding panel here.

Mr. MCINNIS. Thank you, Mr. Chairman, for the courtesy. We appreciate it.

Their statement will be put in the record.

[The statement follows:]

STATEMENT OF PAT GREER, ANIMAS-LA PLATA WATER CONSERVANCY DISTRICT

Mr. Chairman and members of the committee, I am Pat Greer, a member of the Board of Directors of the Animas-La Plata Water Conservancy District, and a lifelong resident of southwestern Colorado. I urge your support for the President's budget request of $7 million to further construction of the Animas-La Plata Water Resource Development Project.

The Animas-La Plata Water Conservancy District is one of the signatories of the Final Settlement Agreement to satisfy the reserved water rights claims of the Southern Ute and Ute Mountain Ute Indian Tribes. Without this negotiated settlement of the Tribes' reserved water rights, non-Indians in southwestern Colorado would have been at loggerheads with our Indian neighbors over water. All parties recognize that by building the Animas-La Plata Project, the cornerstone of the Settlement, there will be sufficient water to allow growth and prosperity throughout southwestern Colorado for Indians and non-Indians alike.

I am what is known as a drysider. I live and farm in the semi-arid region to be served by the Animas-La Plata Project. I support my family through dry land farming. Together with my Indian neighbors, I look forward to receiving water from the Animas-La Plata Project. Irrigation will make a huge difference in my ability to produce a living from my land. We do the best we can every year to grow enough pinto beans, wheat and alfalfa to provide a living for our families. Our big problem is that we cannot depend on getting enough rain to keep the crops growing.

Farmers in La Plata County, Colorado, have seen potentially bumper harvests deteriorate to nothing because of erratic rainfall and lack of irrigation. Access to irrigation water from the La Plata River is limited to the first few months of the growing season. In dry years as early as April, the La Plata River either disappears or is on call to meet Colorado's obligation under the Interstate La Plata River Compact with New Mexico. The result is that, unless there is a chance rain storm, our flourishing crops wither for lack of water.

Our soil is rich and will support valuable crops, but without a reliable water supply we are limited to the farming methods practiced by the earliest settlers. The Animas-La Plata Project, when fully operational, will enable us to capture and store water when it is plentiful, and distribute and use it during times of shortage.

The Animas-La Plata Project will utilize the abundant water from the Animas River to assist those now dependent on the sporadic flow of the La Plata River. The Project will stabilize the agricultural production of our farms and ranches and allow the people of our area to realize a better life. Drysiders, therefore, voted overwhelmingly for the repayment contract between the Animas-La Plata Water Conservancy District and the Bureau of Reclamation in the election held on December 8, 1987. We can now look to the success of the Dolores Project as a model.

I was one of the first dryside farmers to sign a petition for an allocation of Animas-La Plata Project water. The Animas-La Plata Project is our best hope to make the dryside the kind of farmland we need in our part of the country. We cannot, however, build this Project without federal assistance.

The Animas-La Plata Project, however, will assist not only drysiders; the Project will benefit all in southwestern Colorado. A study by Dr. Bernard Anderson, Professor of Economics at Fort Lewis College, has demonstrated that the benefit/cost ratio for the Project in expanded direct benefits will be 1.71:1, and in expanded total benefits will be 2.82:1.

I have been neighbors with the Indian people all my life. We have always gotten along and we have always kept our word to each other. If other Indian Tribes are going to be asked to sit down and negotiate in good faith to reach a settlement of their reserved water rights, they must have the assurance that once those bargains are struck, Congress and the administration will keep their word. I hope you will do just that and provide the $7 million needed to keep the Animas-La Plata Project on a construction schedule that will avoid the reopening of costly, lengthy and divisive litigation of the Ute Tribes' water rights on the Animas and La Plata Rivers.

I thank you for giving me the opportunity to express my support for the Animas-La Plata Project.

PHILADELPHIA AREA PORT PROJECTS

PREPARED STATEMENT

Senator JOHNSTON. Next is William Harrison represening the Joint Committee for the Improvement of the Philadelphia Port.

Is Mr. Harrison present? [No response.]

Their statement will be put in the record.

[The statement follows:]

STATEMENT OF WILLIAM A. HARRISON, JOINT EXECUTIVE COMMITTEE FOR THE IMPROVEMENT AND DEVELOPMENT OF THE PHILADELPHIA PORT

IDENTIFYING REMARKS

The Joint Executive Committee for the Improvement and Development of the Philadelphia Port Area is port-affairs spokesman for twenty-four Delaware Valley civic and trade associations whose names appear at the bottom of this letterhead page. Organized in 1888, this Committee has participated in and promoted all major navigation improvements to the Delaware, Schuylkill and Christina Rivers and to the Chesapeake and Delaware Canal. The members pay no dues beyond the nominal amounts needed to cover the organization's administrative expenses, and its officers serve without compensation.

Our Delaware River marine terminals in Camden, Gloucester, Pettys Island, and Salem in southern New Jersey, Morrisville, Philadelphia, and Chester in Pennsylvania, and Wilmington, Delaware; located in three states and identified collectively as the Ports of Philadelphia; handled approximately 73,790,000 million tons of international waterborne cargo during calendar year 1992. This commerce generated more than four billion dollars into the economy of the tri-state Delaware Valley region.

Seven major oil refineries; the largest refinery complex on the east coast, are located along the Delaware River. These facilities lend strong support to both the economy and to national defense. In 1992, waterborne commerce at the Ports of Philadelphia produced approximately $420 million for the Federal Government in Customs Receipts.

SUMMARY

The Joint Executive Committee recognizes the need for fiscal restraint and with trust in Congress and the Corps of Engineers who have always adequately responded to our needs, we believe this budget as proposed will reasonably fulfill our requirements and urge that these amounts that we propose for our projects be approved.

TESTIMONY

The Joint Executive Committee appreciates the support of the Congress and the Corps of Engineers in maintaining the navigation arteries which sustain the economic vitality of our tri-state region. Reliable data reveals our Ports' activities along the Delaware River account for 53,000 jobs and generate over $4 billion into the economy of the tri-state Delaware Valley region.

The items of our particular concern to which we specifically invite attention are listed below and noted with the funding we believe is required in order to maintain proper standards and assure orderly social and economic progress.

General investigations

Survey: Delaware River Comprehensive Navigation Study (The historical focus of this study on the Delaware River. FY '94 (GI) funds are required to complete the feasibility report for a deep draft anchorage in Delaware Bay.)	$175,000
Preconstruction, Engineering and Design:	
Delaware River—Main Channel. (These funds are required to continue orderly preconstruction, engineering and design of the authorized main Delaware River 45-foot channel deepening project.)	4,000,000
Chesapeake and Delaware Canal Deepening (GI) (Deepening of the C&D Canal and related channels is important to general cargo movements in the mid-Atlantic region. It will increase the commercial use of the Delaware River itself as well as enhance the potential for developing additional cargoes to and from our Delaware River Ports.)	250,000
Operations and Maintenance:	
Delaware River, Philadelphia to Sea	13,000,000
Delaware River, Philadelphia to Trenton	300,000
Schuylkill River	1,400,000
Wilmington Harbor	3,500,000
Chesapeake and Delaware Canal	26,000,000

The funding requirements detailed above are the reasonable requirements to maintain the ports along the Delaware River in a healthy, competitive and progressive state. It is imperative that our channels be well maintained to full project depths in recognition of the 60 million tons of petroleum products which move through our port areas. Full project depths decrease the potential for groundings and the need for lightering and thereby protect against the potential for oil spills.

The port areas described above, Wilmington, DE; Philadelphia, PA; and Camden, NJ can only continue to contribute to the economy of the region with congressional support for the budget amounts proposed. The local support of these navigation projects, and required improvements, as evidenced in the commitments by the Delaware River Port Authority to establish a Regional Intermodal Transfer Yard in Philadelphia and to provide the local interest cost sharing for a 45′ channel. These improvements have favorable benefit cost ratios and will therefore benefit the economy of the Delaware Valley region.

Of particular note is the need to continue work towards completion of the improvements to the Delaware River channels. The monies for both the Delaware River Comprehensive Navigation and the Preconstruction, Engineering and Design for the 45-foot channel from Philadelphia to Sea are essential. The proposed channel deepening has benefits which will exceed costs. The benefits will accrue on over 70 million tons of bulk cargo which is carried on the Delaware River annually. This deeper channel will also reduce the amount of oil now lightered in Delaware Bay due to inadequate channel depths. The reduction in lightering is a reduction in oil transfer in the Delaware Bay which better insures against oil spills. The proposed improvement will also be a boon to the bulk export cargo of scrap iron and coal.

The funding provided thus far has resulted in a completed EIS which not only has shown that a deeper channel will not have any negative environmental impact but the substance and thoroughness of this EIS was so well recognized that it received EPA's Regional Award for the most exemplary EIS document in the year 1992.

Local interests are convinced of the merits of this project and have come forward as sponsors for cost sharing.

Further, we would request that no monies be appropriated for any proposed Corps reorganization without Congressional approval of the plan. We would reiterate that the Philadelphia District has been exemplary in practicing their "Customer Care" for the Delaware Valley region and the New Jersey shore. The District has contributed to our economy and to the development of this region's resources. Consequently, we take this opportunity to reiterate our firm support for the continued retention of the U.S. Army Corps of Engineers Philadelphia District as presently structured. We urge this Committee in their stewardship of Public and Civil Works to assure that any proposed reorganization will not diminish the function of the Philadelphia District.

PASSAIC RIVER FLOOD CONTROL PROJECT, NEW JERSEY

STATEMENT OF PHILIP K. BEACHEM, EXECUTIVE VICE PRESIDENT, NEW JERSEY ALLIANCE FOR ACTION

Senator JOHNSTON. Next, we will hear from the Passaic River Organization for Tunnel Construction [PROTECT], Phil Beachem.

We have gotten behind schedule, as you have probably noticed, so I want to ask you to summarize briefly, if you would.

Mr. BEACHEM. Thank you very much, Mr. Chairman. I am Phil Beachem, the executive vice president of the New Jersey Alliance for Action. We are a statewide organization of some 500 leaders from the government, business, academic, labor, and professional community in New Jersey.

In 1988 we formed a committee called PROTECT to unify support for the Passaic River flood protection project. We have been testifying at various hearings since that time, before this committee as well as others.

I wanted to emphasize the significance that this major flood control project will bring needed flood relief to the part of the New Jersey community which is the most densely developed metropolitan area in the Nation. As we speak here today, residents in the Passaic River basin are currently vacating their homes, being brought to safety from the most recent flood waters as a result of the severe snowstorm. The weather reports in New Jersey today predict three more continuing days of rain. I am suspecting that we are going to have a very severe problem in New Jersey in the next few days.

FUNDING REQUEST

In this regard, on behalf of this project and our committee, we would urge the Congress to appropriate $17 million for the continued engineering and design of this project, so that it may be constructed before the forces of nature have another opportunity to destroy property and life.

Senator JOHNSTON. What would be the estimated cost of the total project?

Mr. BEACHEM. The estimated cost of the total project is $1.2 billion. I would also like to, at this point, Senator, also thank—and I would be remiss if I did not thank Senator Lautenberg and Senator Bradley for their continued support of this project as well. As well as this committee.

Senator JOHNSTON. Thank you very much. I appreciate your testimony. And we are aware of your great problem there and we will try to respond to it.

[The statement follows:]

STATEMENT OF PHILIP K. BEACHEM

"PROTECT" (Passaic River Organizations to Encourage Construction of the Tunnel) is a committee of the New Jersey Alliance for Action. The Alliance for Action is a statewide coalition of leaders from municipal and county governments, business, academic, labor, professional and civic organizations. The Alliance for Action concerns itself with advancing those causes which improve the quality of life for New Jersey residents. The Alliance for Action's involvement in solving the flooding in the Passaic River Basin began with the inception of the Alliance some 18 years ago as a result of the severe flooding in this region.

"PROTECT" was formed in 1988 to bring together New Jersey municipal governments, counties, public agencies, organized labor, business interests, professional and civic groups and concerned citizens united in support of the Passaic River Flood Protection Project. This project will provide flood protection for more than 100 municipalities in New Jersey which lie within the Passaic River Basin.

We wish to emphasize the significance of this major flood control project which will bring needed flood relief to part of the most densely developed metropolitan area in the nation. In this regard we request that a fiscal year 1994 appropriation be made for the Passaic River Project in an amount which will enable the project to be carried forward at an optimum design pace.

We urge the Congress to appropriate 17 million dollars for the continued engineering and design of the project so it may be constructed before the forces of nature have another opportunity to destroy property and devastate human life.

My name is Philip Beachem and I represent "PROTECT" (Passaic River Organizations To Encourage Construction of the Tunnel). "PROTECT" is a committee of the New Jersey Alliance for Action. The Alliance for Action is a statewide coalition of leaders from municipal and county governments, business, academic, labor, professional and civic organizations. The Alliance for Action concerns itself with advancing those causes which improve the quality of life for New Jersey residents. The Alliance for Action's involvement in solving the flooding in the Passaic River Basin began with the inception of the Alliance some 18 years ago as a result of the severe flooding in this region.

"PROTECT" was formed in 1988 to bring together New Jersey municipal governments, counties, public agencies, organized labor, business interests, professional and civic groups and concerned citizens united in support of the Passaic River Flood Protection Plan. This project will provide flood protection for 35 municipalities in New Jersey which lie within the Passaic River Basin.

The individuals and organizations which have endorsed the concept of the Passaic River Flood Protection Project are attached to this testimony.

Thanks to the farsighted vision of New Jersey's Congressional delegation and the support of Congress over many years, the extensive studies of the Corps of Engineers have finally involved a plan of protection from the serious and recurrent flooding in the Passaic River Basin. Over 150 structural and non-structural plans were studied by Federal and State officials; and the State of New Jersey selected and endorsed the Passaic River Flood Protection Project. This unique plan will divert flood waters away from the populated and the damage prone areas, conveying this flood water through an underground tunnel system and meter the outlet discharge into a waterway capable of accommodating the flow.

The present plan will use a large underground tunnel system to resolve the flooding problem, and as a consequence, will result in a minimum of disruption to persons and properties at the surface. Previous flood control plans have encountered resistance from some residents within the basin because of the extensive surface works which would have been required. We note with considerable enthusiasm that this plan involves the acquisition and permanent preservation of more than 5,000 acres of wetlands in the central Passaic Basin. Acquisition, and thus permanent protection, is enthusiastically endorsed by virtually all local interests.

While a few individuals have expressed the view that a better plan would be to purchase the properties which are affected by flooding, evict the residents, and destroy their homes, our examination of this proposal shows it to be entirely impractical. Aside from the human dimension of evicting people and destroying their homes, the simple fact is that to clear out all of the properties impacted by the storm flood levels would involve the relocation of at least 15,000 homes and another 2,000 commercial and industrial buildings at a cost of over 4 billion dollars. That is about double the estimated cost of the authorized project. In addition, the entire cost of this alternative would have to be paid by the state of New Jersey.

The destructive flood of April 1984 made it necessary for over 9,000 homes to be evacuated, and resulted in 4 deaths. One fireman died attempting to rescue a family from their home. The damages which resulted from the flood of 1984 amounted to approximately $439 million. A repetition of the record flood of 1903, which can of course occur again at anytime, would result in damages estimated at over 1.4 billion dollars.

In early December 1992, the powerful storm that battered much of the Northeast coastline also flooded many areas of the lower Passaic River including the Cities of Newark, Kearny, and Harrison, New Jersey. It is estimated that over $30 million in damages resulted from storm tides pushed into the Lower Passaic from the ocean.

We also note that after careful study and with bipartisan support, former Governor Kean and the New Jersey Department of Environmental Protection expressed support for the project, and the State agreed to be the non-Federal sponsor of the project. Also, the entire New Jersey Congressional delegation voted for the Water Resources Development Act of 1990 which authorized the project for construction.

In this regard, we request that a fiscal year 1994 appropriation be made for the Passaic River Project in an amount which will enable the project to be carried forward at an optimum design pace.

Specifically, it will be noted that in Federal fiscal year 1993, the amount of money actually available for the work of the New York District Corps of Engineers was $10 million. This has resulted in a slowing of the progress of this project, further delaying the day when lives and property can be protected.

We believe that it is imperative that the planning and engineering work of the Corps of Engineers be allowed to proceed at the optimum rate so that critically needed flood protection be in place at the earliest possible time. Specifically, we believe that the availability of $17 million during fiscal year 1994, to compensate for less than optimum funding to date, will enable the Corps to make up for the time lost during the recent fiscal years.

We urge the Congress to appropriate $17 million for the continued engineering and design of the project so it may be constructed before the forces of nature have another opportunity to destroy property and devastate human life.

On a related matter which goes to the question of continuing to keep this project on course, we wish to reiterate our strong opposition to the recent proposal to transfer the New York Division office of the Corps of Engineers to Boston as well as to downsize the Corps District offices in New York and Philadelphia. This proposal, will in our judgement, hinder our efforts at keeping major projects such as the Passaic River Flood Control Project on track.

On behalf of "PROTECT", I would like to thank you for the opportunity to present our position to you, Mr. Chairman and the Members of your Subcommittee.

PASSAIC RIVER FLOOD PROTECTION PROJECT ENDORSEMENTS

The Honorable Bill Bradley, United States Senate
The Honorable Frank Lautenberg, United States Senate
The Honorable Robert Roe, Former Member, United States House of Representatives
The Honorable Dean Gallo, United States House of Representatives
The Honorable Robert Torricelli, United States House of Representatives
The Honorable Leanna Brown, New Jersey State Senate, 26th District
The Honorable Joseph Bubba, New Jersey State Senate, 34th District
The Honorable Alex DeCroce, New Jersey State General Assembly, 26th District
The Honorable Robert J. Martin, New Jersey State General Assembly, 26th District
The Honorable Sharpe James, Mayor, City of Newark
New Jersey State AFL-CIO
New Jersey Society of Professional Engineers
American Society of Mechanical Engineers-NJ
Consulting Engineers Council-NJ
New Jersey Society of Municipal Engineers
American Society of Civil Engineers-NJ Section
Society of American Military Engineers-NJ Post
Essex County Board of Chosen Freeholders
Morris County Board of Chosen Freeholders
Passaic County Board of Chosen Freeholders
Union County Board of Chosen Freeholders
Borough of Butler
Borough of Fair Lawn
Borough of Florham Park
Borough of Lincoln Park
Borough of Pompton Lakes
Borough of West Paterson
City of Newark
City of Paterson
East Hanover Township
Fairfield Township
Pequannock Township
Township of Little Falls
Township of Montville
Wayne Township
Mayor's Flood Advisory Committee of Pompton Lakes
New Jersey State Building Trades Council
Morris & Sussex Counties Building Trades Council
Regional Water Management Board
Bergen County Building Trades Association
Natural Resources Citizen Advisory Committee
Heavy & General Construction Laborers Local #472
Building Contractors Association-NJ
Flood Residents Coalition
Iron Workers Local Union #483
National Electrical Contractors Association
New Jersey Asphalt Pavement Association
Association for Bridge Construction and Design
Construction & General Laborers Local Union #172
New Jersey Builders Association
Associated General Contractors Association-NJ
Utility and Transportation Contractors Association-NJ
New Jersey Industrial Development Association
Electricians Local Union #102 I.B.E.W.
Passaic County Building Trades Council
Operating Engineers Local Union #825
New Jersey Alliance for Action
Citizen Committee on Permit Coordination

St. Croix River, MN, Local Protection Project

STATEMENT OF ED CAINE, CITY OF STILLWATER, MN

Senator JOHNSTON. St. Croix River at Stillwater, MN. Ed Caine.

PROJECT HISTORY

Mr. CAINE. Thank you, Mr. Chairman. It is a pleasure to be here today and I want to thank you for the opportunity to bring this message to you. I will be extremely brief, but please do not think my brevity is a lack of importance of this particular project.

Let me just briefly draw you a picture of where we are. Stillwater, MN, is on the St. Croix River, that flows into the Mississippi, about 10 miles down the river. And back in 1936, when the Corps of Engineers were building dams on the Mississippi River, they built one at Red Wing, MN. At that time, Stillwater, the birthplace of Minnesota, where there were about nine sawmills along the edge of the river, left a deep ridge of sawdust and wood debris along the river. Recognizing this, the WPA in 1937–38, built a retaining wall, a double retaining wall, or levee, to protect this very fragile surface from eroding when the water backed up from the dam that was being built on the Mississippi.

In the past 50 years, the 55 years that this wall has existed, it has continued to erode even though we have had adequate care and maintenance, according to the Corps of Engineers. The Corps of Engineers, in a recent study, said that we have about 2 years before that wall will disintegrate and fail in many places. When the wall fails, well, we are going to lose much of the downtown area of Stillwater, all of which is under the flood control program.

So, we are concerned about this right now, and we have 23 sites that are on the National Historic Register that are affected by this, about $32 million worth of property value. The cost of the project is a total of $3.2 million, and was authorized in the Water Resources Development Act this year.

We feel it is extremely important that we get on this right away. The problems have been not only found by the Corps of Engineers, but our own engineers verified these particular needs.

FUNDING REQUEST

We are asking for $2.4 million. The matching dollars that are necessary, the State has set aside one-half of those, and the city has the other one-half by delaying some projects and canceling some others. It is a real emergency for us now. And we would respectfully request this committee to support us in this endeavor. Both Senator Durenberger and Senator Wellstone are supportive of this and have talked, I am sure, with you and the committee staff about this.

If there are any questions, I would be happy to respond to them.

Senator JOHNSTON. Well, thanks for furnishing the pictures. That is very helpful. And we understand the depth of the problem, and we will try to respond.

Mr. CAINE. Thank you.

[The statement follows:]

STATEMENT OF CHARLES M. HOOLEY

Purpose: Request for $2.4 million to, Design, Repair, Construct, and Extend the Retaining Wall System on the St. Croix River at Stillwater, MN.

Background: The 1,000 foot retaining wall system was built in 1937–38, by the WPA, when the Army' Corps of Engineers constructed the lock and dam on the Mississippi River at Red Wing, MN. The completed dam caused the back-up of water into the floodplain at Stillwater. The St. Croix was named one of America's first "wild and scenic rivers," maintained and dredged annually by the U.S. Army Corps of Engineers, and is under the jurisdiction of the United States Coastguard.

The Setting: Stillwater, the "Birthplace of Minnesota," was established in 1843, as the result of abundant timber resources, and the river which provided the necessary transportation for the timber. Three and a half billion feet of logs passed through the nine sawmills located on the riverbank at the Port of Stillwater. The sawdust and wood debris make up much of the soil of the riverfront. The double retaining wall system protects the fragile riverfront from erosion, and prevents most the floodplain from annual flooding.

Protected Structures: The retaining wall system protects 23 sites listed on the "National Register of Historic Places" and more than another 100 others identified in a study by the Corps of Engineers that are recognized as potential sites. A major sanitary sewer trunk line and lift station run less than 100 feet back of, and parallel to the wall. It carries 1.9 million gallons of sewage each day, and is at high risk with the failure of the wall. The base of the interstate lift bridge, which provides the only interstate passage, is built into the wall system. An emergency service road runs adjacent to the retaining wall. More than 130 businesses lie in the floodplain. Data produced by the Federal Emergency Management Agency sets property values in the floodplain at $32 million.

The Problem: The retaining wall system has deteriorated badly in recent years. More than 20 percent of the lower wall has disintegrated, leaving 250 square foot voids under the wharf. This has resulted in dangerous sagging of the wharf, and slippage in the second wall. The Corps states there is a strong likelihood the wall will experience a major failure in the next two years. Should the wall go, then erosion of !he water front would progress at a very rapid rate due to the soil conditions.

Proposed Action: Based on the 1986 Final Feasibility Study of the Corps of Engineers, and the special report of the District Office of the Corps in March of 1992, and the Short, Elliott, Hendrickson Engineering firm on behalf of the City, the retaining wall must be (1) Repaired when such repair is feasible; (2) Replaced when the deterioration has progressed past the repair stage; (3) Extended 300 feet to the south and 1,200 feet to the north to prevent annual flooding of the roadway, and the continued erosion of the riverfront; (4) Construct a secondary wall extending two feet above the surface, and 15 feet below the surface, making use of the rise in elevation, for the purpose of added flood protection.

State and Local Participation: Of the $3.2 million needed for the project, the City has set aside $400,00 by the delay and cancellation of other capital investment projects; the biennial budgets of the MN House and Senate, and the Governor include the remaining $400,000 needed to provide the non-federal matching funds. The Department of Natural Resources of the State has given the project the highest priority.

Results: The project will assure the continued flood protection provided by the existing wall, eliminate the annual flooding of the roadway, assure the year around availability of fire and rescue services, provide fifty year flood protection to the 130 retail operations and the $32 million in property.

Chairman Johnston, and Members of the Appropriations Subcommittee, I appreciate the opportunity to appear before you today, to request $2.4 million in federal funds to design, repair, construct, and extend the retaining wall system on the St. Croix River at Stillwater, Minnesota. The retaining wall protects the fragile riverfront, and the floodplain of downtown Stillwater from high water levels and some of the flooding each spring. I will keep my remarks brief, and ask that the full text of my statement be included in the record.

The project was authorized for $3.2 million in the Water Resources Development Act of 1992. Minnesota Governor Arne Carlson, in recognition of the critical nature of the problem, has included $400,000 in matching funds for the project in the State's Biennial Budget, even though the State has severe financial problems this year. Both the House and Senate of the State Legislature have included similar amounts in their budgets for the project.

The design, repair, construction, and extension of the levee is the only such water resources project included in the State Department of Natural Resources operational budget for the biennium. The City of Stillwater has set aside the remaining

$400,000 in non-federal funds by delaying some, and canceling other capital development projects. The matching funds will be available on October 1, 1993, the beginning of the State's fiscal year.

RETAINING WALL AND RELATED CONCERNS

The wall system and the foundation on which the lower wall rests has experienced severe erosion over the past ten years or so. Preliminary reports by the Corps of Engineers and the engineering firm of Short, Elliott, and Hendrickson (SEH), warn that extensive repair, replacement, and extension of the wall system must be initiated immediately.

The retaining wall system was built by the Works Progress Administration [WPA] in 1937–38, to provide protection to the commercial section of the City, and the docking areas of boats and barges. Fifty-five years ago, there was a crisis, just as there is today. The Corps was building a new lock dam on the Mississippi River at Red Wing, Minnesota that would back up the waters of the St. Croix. The earthen and stone levee of the early 1930's, gave the City some protection, but would quickly wash away with the high waters that would sure to follow when the Red Wing Dam was completed, and the break up of the ice each spring.

Stillwater is located on the West bank of the St. Croix River. It provides the boundary line between Minnesota and Wisconsin for about 120 miles until the St. Croix flows into the Mississippi River. The St. Croix is one of America's first "Wild and Scenic Rivers," and is subject to the legislation that protects these beautiful landmarks of our nation. One of the few lift bridges in the upper Midwest spans the river from Stillwater to Houlton, Wisconsin. The base of the bridge is built into the levee wall. The failure of the wall at that point would result in the closing of the bridge for some time, according to the U.S. Army Corps of Engineers.

An emergency city street runs parallel to the upper section of the wall. The roadway is used by the City for wall maintenance, emergency medical and river rescue work, and serves the fire department by providing access to river water during fire emergencies in historic downtown Stillwater. It also provides access to several businesses that are located close to the river on the north and south ends of the wall system. The street is flooded annually in the spring for 30 to 45 days, restricting any traffic to the northern section of the river frontage. This flooding occurs past the north end of the existing retaining wall, and extends about a thousand feet past the end the levee wall. The proposed extension of the wall, and the raising of the level of the flood plain with fill, would have eliminated this problem every year but two, since 1950.

Extensive work on the sewer system in downtown Stillwater was completed in the fall of 1992. The most serious concern, however, the major sanitary trunk sewer line which services the City. It is located less than 100 feet from, and runs parallel to, the levee wall. Given the content of the soil in that area, the failure of the wall toward the south end of the levee could result in the failure of the pumping system, and the dumping into the river, much of the 1.9 millions gallons of raw sewage that passes through the system each day. The Metropolitan Waste Control Commission and the Minnesota-Wisconsin Boundary Area Commission have expressed their concerns and fears to the City of Stillwater about this pending disaster.

SOIL CONDITION SUSPECT

The history of Stillwater has a direct bearing on the crisis that now exists. First established as a settlement in 1838, and founded in 1843, Stillwater became the most productive logging and sawmill operation in the upper Midwest, as well as a major commercial and industrial center. By 1874, 3.5 billion board feet of logs went through the St. Croix boom, and the nine mills were in operation in Stillwater. The lumbering industry did not reach it's peak until 1895, when 373 million board feet of lumber were shipped.

It was this vigorous industry, more than century ago, and the nine sawmills that lined the riverbank, that is basis for much of our concern today. Studies by the Army Corps of Engineers stated that, ". . . Subsurface soils investigations along the waterfront in Stillwater identified pieces of glass, wood and/or layers of sawdust to depths of more than 20 feet below the ground surface as remnants of the early logging and sawmill activities."

Another study by the U.S. Army Corps of Engineers warns that in case of wall failure, ". . . erosion would progress at a very swift rate." The 1986 Feasibility Study by the Corps stated that soil conditions would create an "unfavorable structural foundation for earthen levees and similar structures." The report excludes other options by stating that, "The extent of wood and sawdust precludes the economics of excavating to remove these materials and backfilling with satisfactory soil."

According to the District Office of the Army Corps of Engineers technical analysis in March, 1992, it was stated that, "There is a strong likelihood that the wall in Stillwater could experience a significant failure within the next two years. Because this whole section of the riverfront property was created by filling during the logging era, soil conditions are suspect. . . . Some areas neighboring this threatened portion of the river have known pockets of sawdust fill. Given these conditions, once the wall failed, erosion would progress at a very swift rate."

FAILURE OF THE WALL SYSTEM

The SEH Engineering firm concurred with the analysis of the Corps, and the subsuent result of such a failure. They have conducted two studies and on-site inspections of the retaining wall system; the first in 1987, and the second in 1991. We have provided each Member of this Subcommittee with exhibits and photographs of the wall, that show the extent of damage to the walls, wharf, and foundation. The two studies, four years apart, have enabled the engineers to determine the rate of detorioration of the structure. Some of the findings determined by the studies were: 1. The failure of the wall south of the bridge, where both the lower wall and wharf have failed, has resulted in the washout of the soil causing the upper wall to shift forward; 2. While 150 feet of the wall had failed at the time of the 1987 study, more than 50 additional feet has washed out by 1991. Now more than 20 percent of the wall has collapsed; and 3. Sixty to 250 square foot voids were found underneath the slabs. The voids and gaps under the wall system have made the lower wall vulnerable to an even more rapid deterioration of the levee. The six inch concrete slabs which form the wharf, are disintegrating as a result of the soil erosion beneath the structure.

A 1987 assessment of property values by the Federal Emergency Management Agency (FEMA) has established the value of the property at $32 million in the floodplain area. The Corps' Feasibility Study noted that Stillwater is enrolled in the National Flood Insurance Program. Future flooding of the area would prove costly to the federal and state governments, as well as the City.

HISTORICAL SIGNIFICANCE OF THE PROJECT

The historic implications of the retaining wall system, and it's solution, are extremely important to the entire State. In recognition of the historical significance of Stillwater as the "Birthlace of Minnesota," the U.S. Army Corps of Engineers conducted an excellent study completed in July, 1985, entitled, "Historical Reconstruction of the Riverfront: Stillwater.

The purpose of the study was to provide the Corps of Engineers with information to be used in the review of options for flood control of the downtown area of Stillwater. The research identified 117 sites in the floodplain as being significant to the entire State. Twenty-three of these sites are listed on the "National Register of Historic Places" by the U.S. Department of Interior. All are threatened by the deterioration and failure of the retaining wall system, and the flooding of the area.

The U.S. Army Corps of Engineers is obligated to protect the cultural or manmade environment, according to their 1985 Study. This obligation is embodied in the National Historic Preservation Act of 1966, and subsequent laws. These laws set forth federal leadership in locating, inventorying, and protecting such sites, the report continues. The proposed reconstruction and extension of the retaining wall system does not threaten, damage, or destroy any of the identified historical sites of the area. The project as authorized in Public Law 102–580 would provide the protection necessary to preserve these historical structures for future generations.

ST. CROIX RIVER FLOOD CONTROL STUDIES AND FEDERAL INVOLVEMENT

Both the upper and lower St. Croix River has been under almost continuous federal, state, and local government studies since 1954. The U.S. Corps of Engineers completed the "St. Croix River Final Feasibility Report and Environmental Assessment" in July, 1986. The initial study of the St. Croix River basin was started in 1965, suspended in 1968, and restarted in 1982, at the request of the City. A reconnaissance study by the Corps of Engineers was completed in 1983. This was followed by the study by the Corps, "Historical Reconstruction of the Riverfront: Stillwater, Minnesota."

While the feasibility study of 1986, was very thorough in most respects, it failed to address the condition of the retaining wall system and its function in flood control in Stillwater. It did, however, fully address the myriad of issues required in flood control projects such as the environment, physical characteristics of the area, fish and wildlife, an analysis of the river flow, past history of flooding, and many others.

Earlier studies directed by Congress and/or conducted by the Corps of Engineers which included the St. Croix River, go back to the beginning of the century. They include studies in practically every decade since 1930.

The Corps of Engineers is also responsible for the dredging of the channel in the St. Croix River at Stillwater. Barge traffic, boat construction, commercial passenger traffic, and extetisive recreational boating continue to maintain a very active port at Stillwater. It is this very activity that has contributed to the deterioration of the retaining wall system, according to the engineers.

PROPOSED ACTION

Based on the feasibility study by the Corps of Engineers, the State of Minnesota, and by the Short, Elliott, Hendrickson firm on behalf of the City, the retaining wall system will be: one, repaired when such repair is possible; two, replaced when the deterioration has progressed past the repair stage; three, extended 300 feet to the south, and 1,600 feet to the north (areas north of the existing wall will be raised with fill by approximately five feet); and four, construct a secondary wall extending two feet above the surface, and fifteen feet below the surface, making use of the rise in elevation, for the purpose of added flood protection.

This project, as proposed, will assure the continued flood protection provided by the existing retaining wall system; eliminate the annual flooding of the emergency access street; assure the year-around availability of fire and rescue services; provide fifty year flood protection to 130 retail operations, and $32 million in property value, provide a knee-wall to serve as a base for emergency action during extreme flood conditions, thus protecting the property of the City and the history of the "Birthplace of Minnesota."

We are fully aware of the necessity for compliance with the National Environmental Protection Act, the need for establishing and acceptance of a "Cooperative Agreement," meeting the special provisions of federal and state laws that effect the wild and scenic rivers, and other state and federal laws that protect the environment and historical sites. We have been working with these agencies over the past year in anticipation of construction and extension of the retaining wall system, and have a summary listing of their letters of support for the project.

For these reasons, we respectfully reguest that this Subcommittee appropriate $2.4 million to design, construct, and extend the retaining wall system on the St. Croix River at Stillwater, Minnesota. Thank you for the opportunity to appear before you today. I will be pleased to respond to any questions you may have.

STILLWATER, MINNESOTA / ST. CROIX RIVER PROJECT

"THE EROSION AND FAILURE OF THE RETAINING WALL SYSTEM"

OVERVIEW:

The City of Stillwater, Minnesota is located on the West bank of the St. Croix, which is designated as one of America's "Wild and Scenic Rivers." The River flows adjacent to Lowell Park and the historic downtown section of Stillwater. An interstate lift bridge spans the river at this point, and connects the States of Minnesota and Wisconsin.

The Stillwater of the 1990's is a hub of activity, specialty shops, and scenic beauty, drawing visitors from all over the midwest. Lowell Park is the focal point for numerous visitor and community events, art fairs, concerts, and tourist attractions. Twenty thousand visitors to the historic area is not unusual on weekends, more than doubling the population of the City.

A one thousand foot wall system protects the floodplain from erosion and flooding of the area during high water periods and spring run-offs. The river wall system, the heavily used lift bridge connecting Minnesota and Wisconsin, Lowell Park, and the busy commercial section of downtown Stillwater are all listed on the "National Register of Historic Places" of the U.S. Department of Interior. All are threatened by the deterioration and failure of the wall system that protects the City and the historic sites.

The protective wall system was built 55 years ago (1937-38) as a project of the Works Progress Administration (WPA). Until recently, the wall system has stabilized the erosion of the fragile river frontage, and has prevented flooding of the area most of the years since it's construction.

The wall system includes a lower wall, most of which extends below the water surface, a 14 foot wharf or walkway, and a 5 foot upper wall. The wharf is under water during high water periods. A secondary city street runs parallel to the upper wall section. The roadway is essential to the City for wall maintenance, emergency medical and river rescue work, and serves the fire department by providing access to river water during fire emergencies in downtown Stillwater.

First established as a settlement in 1838, Stillwater became a major center for logging, sawmill operations, and commercial activities by the middle 1800's. It served as the county seats for St. Croix County, Wisconsin in 1846, and for Washington County, Minnesota in 1849. An 1852 flood and landslide added ten feet of fill to the six acres of land that now comprise the heart of the downtown area. According to engineering studies and core samples in the area, the soil consists of sawdust, wood debris, and river silt, all of which adds to the concern if flooding should occur in the area. **The Army Corps of Engineers warn that in the case of wall failure, "erosion would progress at a very swift rate."**

The City is just completing a $5 million reconstruction project of the infrastructure of the downtown section in the fall of 1992. The existing water mains were inadequate to handle potential fires or support the necessary sprinkler systems in the business establishments; the infiltration of ground water into the sewage system prompted the Minnesota Polution Control Agency to demand a remedy; the storm sewer system was inadequate; and the electrical systems were rated as dangerous to both the public and private property. Tax increment financing was used to rebuild the downtown section support systems, which will spread the repayment of the debt incurred by these projects over several years. These costs reduce the City's options to secure additional funding for the rebuilding and extension of the retaining wall system.

The interstate lift bridge is one of the few such bridges remaining in the upper midwest. The bridge is heavily used, and according to the ACE report, "failure of the wall could lead to temporary loss of the only bridge across the St. Croix River between Hudson and Osceola, Wisconsin, a distance of 28 miles." It is also important to note that Stillwater medical services and Lakeview Hospital provides primary health care services for many Wisconsin residents who are dependent on the bridge for access into the Stillwater area.

THE PROBLEM:

The wall system and the foundation on which the lower wall rests has experienced severe erosion over the past ten years. Reports by the Army Corps of Engineers (ACE), and the engineering firm of Short, Elliot, and Hendrickson (SEH), warn that extensive repair and replacement of the wall system must be completed in the next two years. Failure to act on the repair and reconstruction of certain sections of the wall and the foundation, could be devastating to the entire wall system, the park, and the bridge.

The Army Corps of Engineers preliminary report stated,

> **" . . . The wall that lies immediately adjacent to the road which runs through the city's riverfront park is failing in a number of areas, due to the loss of foundation material. . . ."**

The report continued,

> **"Failure is not the result of inadequate maintenance by the City. Collapse of these sections of the wall would directly expose the riverbank, at which point the road and park would experience rapid erosion if left unchecked. One of the areas showing signs of deterioration is in the vicinity of the heavily used interstate bridge. . . ."**

According to the District (AEC) technical analysis, the report continued,

> **"There is a strong likelyhood that the wall in Stillwater could experience a significant failure during a spring flood event within the next two years. Because this whole section of riverfront property was created by filling during the logging era, soil conditions are suspect. . . . .Some areas neigboring this threatened portion of the river have known pockets of sawdust fill. Given these conditions, once the wall failed, erosion would progress at a very swift rate."**

The major trunk sewer line for the City of Stillwater runs parallel to the river, beginning north of the existing wall system, and extending south of the wall system where it is pumped up to the water treatment center. There are two lift stations used to move the raw sewage for treatment, the first is located about 100 feet from the south end of the wall system.

The failure of the wall system, or unusually heavy run-offs, would demobilize the pumping station, and could result in raw sewage back-up. If failure of the wall could not be checked, erosion could result in a wash-out of the trunk sewer line, and the dumping of untreated sewage into the river.

It has been recommended by the engineers that the wall system be extended by approximately 1,200 feet to the north of the existing wall system, and 300 feet at the south end of the wall. Such action would prevent the continuous erosion of the riverfront and the frequent flooding of the roadway north of the wall system. At the southern end of the wall system, the extension of the wall would halt the erosion process, and would safeguard the sewage lift station. Further, the extension of the wall system would provide greater protection to the bridge and park area, and ensure a longer life expectancy for the existing sections of the wall system. Information and data regarding the trunk sewer line was not available to the Army Corps of Engineers at the time their preliminary study was made, consequently, this phase of the problem was not addressed in their report.

The second study and analysis of the wall system condition was completed by SEH engineers in October, 1991. The SEH report provides exhibits and photographs (see attached), that show the extent of the damage to the walls, wharf, and foundation. The earlier study conducted in 1987, enabled the engineers to assess and quantify the damage in the four-year time period between the two studies, and and to determine the rate of deterioration. The studies provide the following types of information regarding the status of the wall system:

1. Failure of the wall south of the bridge, where both the lower wall and the wharf have failed, has resulted in a washout of the soil has already caused the upper wall to settle and move forward.

2. An additional 50 feet of the lower wall has collapsed since the 1987 inspection, bringing the total to 200 feet of collapsed wall. The study shows that 20% of the lower wall had failed at the time of the 1991 study.

3. Sixty to 250 square foot voids were found underneath the slabs. The voids and gaps caused the forward movement of the upper wall above the water surface, and the deterioration of the upper wall below the water surface. The six inch concrete slabs which form the wharf are disintegrating as a result of the soil erosion.

COSTS RELATED TO THE PROJECT:

The Army Corps of Engineers has estimated that the cost of repairs and replacement of sections of the existing wall system will cost $1.2 million. The Corps pointed out that this estimate does not include costs related to the design or architectural work on the project. The extension of the wall to the north and south to prevent annual flooding, will require an expenditure of $1.2 to $1.4 million Related costs, including design, architectural work, the required modifications to the roadway, and the area surrounding the retaining wall, are

are estimated to be between $.7 and $.9 million. The project was authorized by Congress in P.L. 102-580 for $3.2 million; $2.4 million of federal funds, and $800,000 of non-federal matching funds, based on the estimated costs of the U.S. Army Corps of Engineers, and studies of an independent engineering firm.

The 25% matching requirement will be provided by some combination of State and local funding. The City of Stillwater has set aside $400,000 from the tax increment financing (TIF) which was originally designed to provide funds for the repair of the downtown infrastructure. The remaining $5 million in TIF funds were used to bring the water, sewage, storm sewers, electrical system, and streets up to code. Much of the downtown infrastucture development was mandated by State and Federal government environmental and regulatory agencies, and involved fire protection for buildings on the National Regisister of Historical Sites, and environmental issues including the seepage of river water into the sanitation sewer. A request for $400,000 in State matching funds is now under consideration by the Minnesota State Legislature and the State Department of Natural Resources.

Innitially, the Corps of Engineers reviewed the project as a project to be funded under Section 14 of the Flood Control Act of 1946, however, the Corps of Engineers is limited under Section 14, to work in which the maximum federal contribution does not exceed $500,000.

Additional costs over the $500,000 limitation must be born with non-federal funds.The level of available funding under this section would have required the City to provide over $2 million of the project costs, an unrealistic commitment for a city the size of Stillwater.

Proposed Solutions:

The property north of the existing wall system, and the street that runs adjacent to the river are subject to severe erosion and frequent flooding. An attempt to correct the problem with fill and riprap has not been successful. The high water levels and water movement, exacerbated by the increased use of recreational craft in the river, and ice break-ups in the Spring, has accelerated the erosion, and washed the rock into the river.

The ACE report states there is "insufficient room for a normal riprap solution." **SEH engineers have suggested that the level of the roadway be raised four to five feet, and the wall system extended by 1,200 feet. This remedy would protect the roadway from annual flooding, prevent further erosion of the river front, and provide additional protection to the existing wall system. Further, the roadway is the only access for fire and emergency medical vehicles north of the wall system. The roadway is under water as much as 45 days each year.**

The property south of the existing wall presents a similar problem with erosion and high water problems. The sewage lift station is located toward the south end of the wall, and docking facilities for the large paddle boats that use the river are located south of the existing wall system. **The SEH engineering firm has recommended the extension of the wall system by 300 feet, for the same reasons as exist at the north end of the wall system.**

A flood prevention study of the of the area was conducted by the ACE about nine years ago to determine the feasibility of certain flood control procedures and options. The study concluded that a retractable wall as a back-up to the wall system would be required to guarantee full protection of the park, structures, and the bridge.

All of these structures, the park, the bridge, and the buildings of downtown Stillwater, lie on the floodplain of the St. Croix River. The cost of building such a wall was estimated at $9 million. Further action was suspended as a result of the cost/benefit ratio. The City concurred that such an expensive and drastic solution was neither necessary nor desirable. It is important to note that the severe erosion that exists in 1991, was not fully evident in 1982. The last major flooding of the area was in 1969. While the river level generally exceeds the level of the wall system for several days during spring run-offs, it does not create problems that can not be managed by the city.

SUMMARY:

The wall system that protects historic Stillwater, Lowell Park, and the interstate lift bridge has deteriorated significantly, to the point where 200 feet of the 1000 foot system is now in a "failed" condition. The location of the the trunk sewer line and lift station adjacent to the river creates an additional problem to be reckoned with.

The Army Corps of Engineers warn that the wall system may fail during the next two years if extensive repair and reconstruction work is not completed. The soil underneath many of the historic buildings, the park, and the interstate lift bridge, is composed of river silt, and debris from the logging operations more than a century ago. In the case of wall failure, the underlying soil would wash away very quickly.

The Stillwater City Council has requested that the U.S. Army Corps of Engineers and the State of Minnesota take immediate action to design and construct the necessary structure to prevent potential flooding of the facilities and the destruction of the riverfront area adjacent to the St. Croix River at Stillwater, Minnesota. The urgency of the situation dictates that this action be initiated and completed as quickly as possible.

There is no question as to **what** needs to be done in regard to the wall system; the question is, **how** can this work best be accomplished, and **how** can financing be arranged so as not to place an undue burden on the citizens and businesses of this small community. The existing programs of the Army Corps of Engineers do not provide the level nor the type of assistance necessary under the Section 14, Emergency Program.

The City of Stillwater is prepared to provide local resources toward the work on the wall system, however, the $500,000 limitation on projects funded under Section 14 of the Flood Control Act of 1946 would require the City to provide 80% of the financing, or more than $2 million. This is too formidable an amount for a community of this size. The historic designation of downtown Stillwater, the interstate bridge, the wall system, and Lowell Park, requires that the original structure be maintained in appearance to the extent possible.

The St. Croix River and the Stillwater area provides recreational opportunities for Minnesota, Wisconsin, and the entire upper midwest section of the country. Stillwater stands in history as the "Birthplace of Minnesota." It is important that the beauty and history of the area be preserved for generations to come. It is for these reasons that the City of Stillwater requests a $2.4 million federal appropriation for the repair, reconstruction, and extension of the existing wall system on the St. Croix River, and $400,000 in State matching funds.

FIELD INSPECTION REPORT
STILLWATER EROSION PROTECTION WALL
LOWELL PARK

OCTOBER 10, 1991

OBSERVATION

STATION

(-)0+75 - Footing of upper wall is undermined. Riprap has failed resulting in loss of curb and catch basin.

(-)0+65 - North corner slab broken and settled approximately 6 inches.
- Top corner of lower wall deteriorated.
- Upper and lower wall generally sound.

(-)0+65 to 0+30 - Wharf slab settled with extensive surface deterioration.

0+00 to 0+40 - River edge of slab severely deteriorated.

0+55 - Expansion joint in lower wall deteriorated opening a 6-inch by 6-inch hole to a ±60-square-foot void beneath slab.

0+80 - Expansion joint in lower wall deteriorated opening a 6-inch by 6-inch hole to a ±60-square-foot void beneath slab.

1+00 to 2+00 - Upper wall moved forward 1 inch at top.

1+80 - Expansion joint in lower wall deteriorated opening a 6-inch by 6-inch hole to a ±20-square-foot void beneath slab.
- Slab corner broken.
- Lower wall face spalled.

2+30 to 3+00 - Slab surface is severely deteriorated.
- River edge of slab broken exposing reinforcement.

General Note: (-) 0+65 TO 3+00

Lower wall was constructed in 1938± as an 8-foot-high retaining wall with a footing placed 2 feet below riverbed. Riprap protects the footing. No undermining of the lower or upper wall was observed. The upper wall is in fair condition with no significant settlement or cracking.

Deterioration of the expansion joints has allowed voids to develop beneath the slab.

The wharf slab shows moderate cracking and settlement with severe surface deterioration near the gazebo (Sta. [-]0+65 to 0+30) and north of the bridge (Sta. 2+30 to 3+00).

The wooden fender (bumper) is missing along most of the length of the lower wall leaving projecting bolts exposed to impale watercraft.

3+00 to 3+38 - Bridge pier.
- Wharf slab below bridge has cracked and settled.

3+38 to 3+48 - Lower wall beneath stairs is missing.

4+00 - Hole in lower wall face 24 inches by 24 inches.
- Void under slab approximately 250 square feet with a 1-foot 6-inch vertical space at lower wall and a 6-inch vertical space at upper wall.

4+00 to 5+80 - Lower concrete wall moved inward 6 inches to 12 inches from original position.

4+40 to 4+80 - New wharf slab.

4+60± - New submerged 36-inch storm sewer outlet.

5+40 - Major crack in upper wall.
- Upper wall has settled approximately 3 inches and has moved forward approximately 2 inches.

6+40 to 7+80 - Lower wall has failed. It lays horizontally and is now located approximately 3 inches back from the original position.
- Extensive void under wharf slab with a 2-foot vertical space at lower wall and a 1-foot vertical space at upper wall.
- Stem of upper wall is visible under slab.
- Wharf slab has settled as much as 1 foot along face of lower and upper walls.
- Wharf slab shows extensive cracks and deterioration.

- Extensive deposit of soil that had been eroded from under the wharf slab is located in front of the lower wall.
- Stairs on lower wall have collapsed.

7+80 to 8+50 - Lower wall has tipped inward under the slab.

8+47 - Lower wall face deterioration approximately 1.5 feet by 3 feet.

8+60 - Forty-eight-inch storm sewer outlet at Nelson Street. Flap gate is free from hinges and is located crosswise in the opening. The brick storm sewer invert is missing.

8+90 - Spall in lower wall 1 foot by 3 feet.
- Ramp slab edge is deteriorated.

9+40 to 10+50 - Riprap has failed beyond wall resulting in erosion of pathway.

General Note: 3+38 to 8+47
Lower wall is comprised of a 1938± concrete wall set upon the top of an older stone rubble wall. The concrete wall has failed in most areas resulting in erosion of soil beneath the slab and settlement of the wharf slab. The upper wall has begun to settle and move forward.

Lake Andes-Wagner and Marty II Project, South Dakota

STATEMENT OF LEO HOLZBAUER, EXECUTIVE DIRECTOR, LAKE ANDES-WAGNER/MARTY II RESEARCH DEMONSTRATION PROJECT

Senator JOHNSTON. Next, the Lake Andes-Wagner water systems with Leo Holzbauer, executive director.

Mr. HOLZBAUER. Thank you, Mr. Chairman. My name is Leo Holzbauer, and I am a family farmer and executive director of the Lake Andes-Wagner Water Systems, Inc., a research project which is located in central South Dakota.

I thank you for this time to testify in regard to this important research project and the funding required to carry this project out in fiscal year 1994 and the years to come until this needed information has been gathered and the final report has been submitted to Congress.

The State of South Dakota, the Yankton Sioux Tribe, and the Lake Andes-Wagner Water Systems, Inc. sponsors have already contributed in excess of $2.5 million of their own money in completing and engineering the environmental impact statement and working with Congress to have this priority project authorized in the 102d Congress. Then it was signed by the President of the United States in 1992.

The Lake Andes-Wagner/Marty II research project is a 5,000-acre research effort authorized by Congress to determine the drainage properties of glacial till soils and the effect of irrigation water movement within these soils and the wetland and wildlife enhancement activities which can be implemented in areas having this naturally occurring element.

Research is needed in these areas, not just for the local project in South Dakota, but for most of the Western United States, where selenium exists.

FUNDING REQUEST

The State of South Dakota and the local project sponsors are requesting $2.1 million of Federal funding to support the Bureau of Reclamation's planning efforts in fiscal year 1994. This is an essential research demonstration program.

Senator JOHNSTON. What is the total cost of the project?

Mr. HOLZBAUER. The total cost over a 10-year period is around—they estimate it at $30 million.

Senator JOHNSTON. For the 5,000 acres?

Mr. HOLZBAUER. Yes; over a 10-year period. For this research. We have the plan of study that was put together, I have here with me, in 1990, which is an interagency effort by the Department of the Interior, the Department of Agriculture, EPA, U.S. Fish and Wildlife, the Yankton Sioux Tribe, South Dakota Department of Game, Fish and Parks, the South Dakota Department of Environment and Natural Resources, and the Lake Andes-Wagner Water Systems, Inc.

Those fundings are for the study, organizational activities, the preconstruction engineering, and the Fish and Wildlife coordination with EPA, the NEPA compliance.

The Bureau of Reclamation has testified in support of this demonstration project before Congress. This support is based largely on the geographical broad application of the study findings to future operations of the Bureau of Reclamation and the private sector projects throughout the Western United States.

The experiment with this is the minimal irrigation water application rates to reduce water consumption needs and the field study testing for the best management practices for pesticide and fertilizer application and alternative farming practices, as they relate to ground water quality.

And then the enhancement of fish and wildlife habitat as a conjunctive use of the project water facilities. The U.S. Fish and Wildlife Service testified as to the benefits to them in carrying out their nationwide contaminants program.

The USGS and the EPA testified as to the anticipated transferability of the study findings in areas like irrigation water quality questions around the country.

The project is an ideal for these studies because it would probably be the only place where the environment does not have already remedial cleanup actions, the variabilities can be minimized, and the demonstration program can be tightly controlled and maintain the amount of return flows in a manageable level.

I have with me also over 300 signatures from the project area in support of this research project. This project is a very high priority in our area, so our people will be assured that we are using their precious, God-given natural resources—our soil and our water—in an environmentally safe and sound manner, benefiting both the people and the fish and wildlife.

Mr. Chairman, and the members of the committee, I want to thank you for allowing me the time to express our needs in building our infrastructure, economically sound, and moving our rural communities ahead safely.

If there are any questions, I will be happy to answer them at this time, Mr. Chairman.

Senator JOHNSTON. Well, thank you very much, Mr. Holzbauer. We are glad to learn more about this project, which we authorized in our bill last year, that came out of our authorizing committee—Energy and Natural Resources—and we will look at that with great interest this year.

Mr. HOLZBAUER. I sure appreciate it. And Senator Daschle and Senator Pressler and Congressman Tim Johnson are in full support of this project, this research project for the need to the area.

Senator JOHNSTON. Yes, indeed.

Mr. HOLZBAUER. Thank you.

Senator JOHNSTON. Thank you.

[The statement follows:]

STATEMENT OF LEO HOLZBAUER

Mr. Chairman and members of the subcommittee; I am Leo Holzbauer, Executive Director of the Lake Andes-Wagner/Marty II Research Demonstration project, which is located in South Central South Dakota. I thank you for this time to testify regarding this important research project and the funding required to carry out this project in fiscal year 1994 and in the years to come, until this needed information has been gathered and the final report has been submitted to Congress.

The State of South Dakota, Yankton Sioux Tribe and the Lake Andes-Wagner Water Systems, Inc. sponsors have already contributed in excess of 2.5 million dollars of our own money, completing the Environmental Impact Statement and working with Congress to have this priority project authorized in the 102nd Congress. It was then signed by the President of the United States in October of 1992.

The Lake AndesWagner/Marty II Research Demonstration Project is a 5,000 acre research effort authorized by Congress to determine the drainage properties of glacial till soils; the effects of irrigation water movement within these soil types; and wetland and wildlife enhancement activities which can be implemented in areas having this naturally occurring element. Research is needed in these areas, not just for our local project in South Dakota, but for most of the Western United States where selenium exists.

The State of South Dakota and the local project sponsors are requesting 2.1 million dollars of Federal funding to support the Bureau of Reclamation's planning efforts in fiscal year 1994 for this essential research demonstration program. For Reclamation to proceed with the demonstration in accordance with the schedule and estimates included in the 1990 Plan of Study, we propose funding in these amounts:

Study Organization Activities	$350,000.00
Pre-construction Engineering	1,700,000.00
Fish and Wildlife Coordination and NEPA Compliance	50,000.00
Total	2,100,000.00

The Bureau of Reclamation testified in support of this demonstration project before Congress in 1990. This support was based largely on the geographically broad application of the study findings to future operations of Reclamation and the private sector projects throughout the Western United States; particularly areas where water supply or return flow water quality problems exist. Areas of the demonstration include:

—Experimenting with minimal irrigation water application rates to reduce water consumption and drainage return flows. Results to be measured include: crop production, soil chemistry changes, drainage water quantity and quality and the reduction in water consumption requirements.

—Field scale testing of best management practices for pesticide and fertilizer applications and alternative farming practices as they relate to ground water quality, operational costs, and crop production.

—Irrigation water application and scheduling methods that may apply to minimize return flows while maintaining an acceptable level of crop production.

—Economic evaluation of the production of alternative, non program, crops with the use of the above methods and practices; considering cost of crop production and profitability.

—The enhancement of fish and wildlife habitat as a conjunctive use of project water and facilities.

—Practical application of technology for removal of chemical constituents, primarily selenium, from irrigation return flows.

The U.S. Fish & Wildlife Service testified as to benefits to them in carrying out their nationwide contaminants program. The USGS and EPA testified as to the anticipated transferability of the study findings to areas with irrigation water quality questions around the country. (refer to hearing record S. HRG–101–1013 dated June 19, 1990.

The project will be ideal for these studies because it may be the only return flow/water quality study in an environment which does not already have remedial cleanup actions and where variables can be minimized. The demonstration project can be tightly controlled to maintain the amount of return flows at a manageable level, and to terminate return flows if necessary.

This demonstration would provide information to allow a sound supportable decision on whether to proceed with the Lake Andes-Wagner/Marty II project. The demonstration phase will also allow a much closer determination of costs for the final project.

I also have with me over 300 signatures, from the project area, in support of this research project. This project is of very high priority in our area so our people will be assured that we are using our precious God-given Natural Resources, our soil and water, in an environmentally safe and sound manner, benefiting both our people and our fish and wildlife.

Mr. Chairman and members of the committee, thank you again for allowing me this time to express our needs in building our infrastructure economically sound and moving our rural communities ahead safely.

TENNESSEE RIVER BASIN PROJECTS

STATEMENT OF JANICE L. JONES, EXECUTIVE DIRECTOR, TENNESSEE RIVER VALLEY ASSOCIATION

Senator JOHNSTON. Our final witness today is Ms. Janice L. Jones, executive director of the Tennessee River Valley Association.

Ms. JONES. Good afternoon, Mr. Chairman. Thank you very much for the opportunity of appearing here today. I am Jan Jones, executive director of the Tennessee River Valley Association, a regional, nonpartisan, economic development association representing the citizens of the seven States encompassing the Tennessee Valley.

With me today is Mr. Rich Humrick, who is with Volunteer Barge in Nashville, TN. He is one of our directors. Mr. Chairman, we have approximately 25 citizens from throughout the region here with me in Washington today and some of these individuals are sitting here in the testimony room today.

Each year our organization selects several projects of significant economic impact potential for unified support. Mr. Chairman, this association supports the Tennessee Valley Authority's fiscal year 1994 budget and we request that its funding be maintained at the level that it is our understanding will be recommended in the President's budget.

We also want to mention several specific projects that fall under the TVA budget.

PICKWICK LOCK AND DAM CHANNEL MODIFICATION

One of these is the Pickwick Channel modification project. This project exists on the Tennessee River in a very sharp bendway below Pickwick Lock and Dam. The project is to remove a hazardous underwater rock ledge along the navigation channel. This hazard could possibly result in a toxic spill should a barge suffer hull damage upon grounding on this ledge. This is an environmentally safe and sound project, as well as a navigation improvement. Construction will begin in fiscal year 1993 and with sufficient funding, be completed in 1995.

CHICKAMAUGA LOCK REPLACEMENT

Another project is the Chickamauga Lock replacement project, which is located on the upper Tennessee River. We request $3.5 million in fiscal year 1994 to begin preliminary engineering and design work, construction and testing of physical models, and foundation borings for a new lock at Chickamauga Dam. The existing single-barge lock is experiencing significant structural problems and will require lengthy lock closures for maintenance and repairs. Around the turn of the century, this lock is scheduled to be taken out of commission for approximately 2 years for maintenance and repair. This 2-year outage will completely shut off the upper Tennessee River to both recreational and commercial traffic and this is completely damaging to business and industry that exists on the upper Tennessee River that depend on water transportation. We have no auxiliary lock at this particular location.

LOUDON, TN, RAILROAD BRIDGE REPLACEMENT

The Loudon railroad bridge is another project that falls under the TVA budget. We support maintaining $1.1 million in fiscal year 1994 to complete TVA's portion of an agreement with Norfolk Southern Railway to change out the spans of this railway bridge, which was built in the mid-1800's. The bridge's navigation span provides only one-half of the standard 350-foot horizontal clearance needed for safe navigation. Construction will be complete in fiscal year 1993. Reimbursement for TVA to Norfolk Southern Railway was spread over a 3-year period, with TVA's final payment due in fiscal year 1994.

NATIONAL FERTILIZER AND ENVIRONMENTAL RESEARCH CENTER

We also support the National Fertilizer and Environmental Research Center that falls under TVA's budget. This center serves as a national laboratory to conduct and promote quality in research, development, education, and commercialization of technologies that enhance the environment and agriculture. NFERC also serves as a model for our Nation in environmental and agricultural research.

KENTUCKY LOCK ADDITION

There is one other project, Mr. Chairman, that falls under the U.S. Army Corps of Engineers budget, and that is the Kentucky Lock addition project, which exists at the mouth of the Tennessee River. The feasibility report has been approved for a new 110-by-

1,200-foot lock at Kentucky Dam. The next step is authorization in the 1994 Water Resources Development Act. We certainly support a continuation of funding for Kentucky Lock project in the Corps of Engineers fiscal year 1994 budget to keep this project ongoing.

Mr. Chairman, I sincerely appreciate the opportunity to be here and present testimony today. We appreciate the excellent work of this committee, and the support that we have received in the past for these projects.

Senator JOHNSTON. Well, thank you very much, Ms. Jones. We appreciate this very much. And we will try to accommodate. Of course, your cost on these projects is tremendous and our dollars are short, but we recognize the importance of navigation and the importance of Tennessee Valley Association in pushing these projects.

So we are going to try to continue to do a good job for you.

Ms. JONES. All right. We appreciate it, Mr. Chairman. Thank you.

[The statement follows:]

STATEMENT OF JAN JONES

SUMMARY

Mr. Chairman, members of this Committee, I am Jan Jones, Executive Director of TRVA, a regional, economic development association. I humbly request this Committee's approval of-funding for the following projects:

This association supports the Tennessee Valley Authority's fiscal year 1994 budget. We request that TVA's funding be maintained at the level recommended in the President's budget. We also want to ask your support for several specific projects under TVA's budget, as follows:

Pickwick channel modification project.—We request $4 million for fiscal year 1994 to remove a hazardous underwater rock ledge along the navigation channel in a sharp bendway below Pickwick Lock. This hazard could result in a toxic spill should a barge suffer hull damage upon grounding on this ledge. This is an environmentally sound project as well as navigation improvement. Construction will begin in fiscal year 1993 and, with funding, be completed in fiscal year 1994.

Chickamauga Lock replacement project.—We request $3.5 million for fiscal year 1994 to begin preliminary engineering/design work, construction/testing of physical models and foundation borings for a new lock at Chickamauga Dam. The existing single-barge lock is experiencing significant structural problems and will require lengthy lock closures for maintenance and repair. With no auxiliary lock, closure completely shuts off the Upper Tennessee River for the business and industry it serves.

Loudon Railroad Bridge.—We support maintaining $1.1 million for fiscal year 1994 to complete TVA's portion of an agreement with Norfolk Southern Railway to change out the spans of the railway bridge, built in the 1800's, at Loudon, TN. The bridge's navigation span provides only one-half of the standard 350′ horizontal clearance needed for safe navigation. Construction will be complete in fiscal year 1993. Reimbursement was spread over a three-year period with TVA's final payment due in early fiscal year 1994.

National Fertilizer and Environmental Research Centet [NFERC].—We support $38.8 million in TVA's fiscal year 1994 budget for continued operation of NFERC. The Center serves as a national laboratory to conduct and promote quality in research, development, education and commercialization of technologies that enhance the environment and agriculture. NFERC serves as a model for the Nation in environmental and agricultural research.

We also request support for the following project under the U.S. Army Corps of Engineers FY94 budget.

Kentucky Lock addition project.—The feasibility report has been approved for a new 110′ x 1200′ lock at Kentucky Dam. The next step is authorization in the 1994 Water Resources Development Act. We support a continuation of funding for the Kentucky Lock project in the U.S. Army Corps of Engineers fiscal year 1994 budget.

Mr. Chairman, I appreciate having this opportunity to appear before this Committee and respectfully urge that you give thoughtful consideration to our request. Thank you.

TESTIMONY

Mr. Chairman, Members of the Committee, thank you for allowing me the opportunity to appear here today. I am Jan Jones, Executive Director of the Tennessee River Valley Association (TRVA), regional, non-partisan economic development association representing the citizens of the seven states encompassing the Tennessee Valley.

Accompanying me today are approximately 25 citizens from throughout the region representing business and industry, banking, transportation, education, ort and terminals and other organizations. Our testimony also has the endorsement of the Association of Tennessee Valley Counties which represents city and county elected officials from the 201 Tennessee Valley counties.

Each year the TRVA membership selects several projects of significant economic impact potential for our unified support. It is with humble respect that we present these projects to this distinguished committee.

Mr. Chairman, this association supports the Tennessee Valley Authority's fiscal year 1994 budget and we request that its funding be maintained at the level recommended in the President's budget. We also want to take this opportunity to testify on behalf of several specific projects under the TVA's fiscal year 1994 budget, as follows:

PICKWICK CHANNEL MODIFICATION PROJECT

This project is necessary to remove an underwater rock ledge that exists in the sharp bend below Pickwick Lock and Dam. The swiftness of the current, combined with sudden fluctuations of water levels and today's increased tow sizes have resulted in an increased number of barge groundings along this stretch of waterway. This creates an ever increasing possibility of a hazardous or toxic spill should a barge suffer hull damage upon grounding.

The USCG believes that the navigation channel below Pickwick poses a safety problem because channel marker buoys cannot be kept in place. To date, none of the reported groundings have resulted in personal injury or spill of toxic/hazardous materials; however, the probability of such an event becomes greater as volume of traffic increases. This is an environmentally sound project as well as navigation improvement.

TVA proposes to increase the width of the navigable channel below Pickwick Lock by removing this underwater rock ledge., All permits needed for the project have been obtained. In fiscal year 1993 TVA will relocate mussels in preparation for dredgework to begin. Pending availability of funds, dredgework could be accomplished in fiscal year 1994 with a total project cost of $10 million. We request $4 million for fiscal year 1994.

CHICKAMAUGA LOCK REPLACEMENT PROJECT

Chickamauga Lock, near Chattanooga, TN, is one of the oldest and smallest (60′ by 360′) locks on the Tennessee River. Completed in 1937, the aging lock is showing signs of severe structural deterioration. It is plagued by concrete growth, in need of constant repair and is a source of extreme hardship and high cost for upstream businesses which employ thousands of workers.

Because of the current "one-barge-at-a-time" lockages at Chickamauga, rates for commercial traffic above Chattanooga are approximately double those below Chickamauga. Currently, it takes an average eight-barge tow about eight hours to pass through Chickamauga Lock as opposed to one hour through the newer, larger locks downstream.

Around the turn of the century, Chickamauga Lock will require an approximate two-year closure for major maintenance and repair work. A closure of this magnitude would be devastating for existing business and industry relying on water transportation and is a major deterrent to future industrial and economic growth opportunities.

We support building a new 110′ x 600′ lock riverside of the existing lock. The new lock could accommodate a modern eight-barge tow in a single lockage. The existing lock could be used as an auxiliary. With the necessary funding it will take approximately 10 years to complete. Engineering design could begin upon completion of a detailed feasibility study which is now underway and scheduled for completion in late 1993.

We, therefore, request $3.5 million in fiscal year 1994, earmarked specifically for this project, to begin preliminary engineering and design work, construction and testing of physical models and additional foundation borings relative to lock replacement at Chickamauga.

LOUDON RAILROAD BRIDGE

During 1992 the Norfolk Southern Railway began changing out the eleven (11) spans of its railroad bridge, built in the mid 1800's, at Loudon, Tennessee. The bridge's navigation channel span is situated in a sharp bend of the river adjacent to a rock bluff and provides for approximately one-half of the standard 350-foot horizontal clearance for other bridges on the Tennessee River. Over the years, as tow and barge sizes have increased, the bridge has become one of the three most restrictive points on the entire Tennessee River. Also, the channel span in the railroad bridge does not align with the channel span in the highway bridge about .3 miles upstream. As a result, tows must exercise extreme caution and some choose to "double trip" their barges through the bridge to avoid possible accidents.

During 1993, Norfolk Southern Railway will complete the 11 spans, increasing the horizontal clearance of the channel span from 164 feet to 267 feet. TVA will widen the navigation channel bottom and dredge approximately 2,100 cubic yards of material from the river bottom. This project is scheduled for completion in 1993 and will remove this navigation hazard.

Under the TVA Bridge Act, TVA will reimburse the railroad for the additional costs of replacing the navigation channel span. Reimbursement was spread over a three-year period with TVA's final payment to be paid in early fiscal year 1994. This project is an excellent example of TVA's partnership with the private sector.

We sincerely request $1,091,000 be maintained in TVA's fiscal year 1994 budget to complete TVA's obligation for this project.

NATIONAL FERTILIZER AND ENVIRONMENTAL RESEARCH CENTER

NFERC, located at TVA-Muscle Shoals, Alabama, serves as a national laboratory to conduct and promote quality in research, development, education and commercialization of technologies that will enhance agriculture and the environment. The center's present activities emphasizes agricultural practice to reduce pollution such as use of winter crops to capture nitrogen and soil tests to prevent overfertilization of nitrogen materials. TVA is cooperating with EPA, USDA and universities in 40 states to introduce environmental safeguards at agricultural retail operations across the country. In addition, NFERC has programs for handling animal wastes to prevent runoff and for converting wastes into cornercial products such as animal feed and potting soil.

TVA's NFERC is the nation's only facility for scientifically determining the potential of constructed wetlands to treat municipal, industrial and agricultural wastes. This center serves as a model for the nation in agricultural and environmental research.

We request $38.8 million in TVA's fiscal year 1994 budget for NFERC.

We also request the following under the U.S. Army Corps of Engineers FY94 budget:

KENTUCKY LOCK ADDITION PROJECT

Situated near the mouth of the Tennessee River, Kentucky Lock provides the only economical waterway access from the Mississippi, Illinois, Missouri and Ohio Rivers to the Tennessee Valley region. Kentucky Lock also acts as the door to a backup system for the inland waterway. In times of drought, as in 1988, an alternate route to the lower Mississippi is available through Kentucky Lock to the Tennessee-Tombigbee Waterway and the Gulf of Mexico. This is economically important as well as beneficial to national defense.

Kentucky Lock's 600′ chamber is too small to handle a modern 15-barge tow without two lockages. This greatly increases the processing time and further compounds the problem of congestion and gives Kentucky Lock one of the highest transit times in the inland waterways. A new 110′ x 1200′ lock chamber adjacent to the existing lock at Kentucky Dam is proposed. The project would create about 500 jobs during the peak seven years of construction and has a 1.7 to 1 benefit/cost ratio.

The Feasibility Report has been approved by the Chief of Engineers and is now in the hands of Secretary of the Army for Civil Works awaiting recommendation to Congress for authorization. The next step is authorization in the 1994 Water Resources Development Act. We support a continuation of funding for the Kentucky Lock Project in the U.S. Army Corps of Engineers fiscal year 1994 budget.

Mr. Chairman, we recognize that NASA and the nation's space program does not come under this Committee. However, we would also like to request continued Congressional support for our nation's space program. It's benefits to the citizens of this region and our nation through research and technology that can be utilized by the private sector as well as defense and our world wide status make it vitally important. We would also like to request Congressional support for the following specific NASA program:

NASA'S ASRM FACILITY

Continued funding for NASA's Advanced Solid Fuel Rocket Motor (ASRM) facility at Yellow Creek, Mississippi. At the end of fiscal year 1993, $1.5 billion will have been spent on ASRM, facility construction will be 90 percent completed and the ASRM design will be nearly finished. It will take approximately $1.7 billion to complete ASRM development and prepare for production versus a required $1.4 billion in direct and indirect non-recurring cost to terminate ASRM.

We humbly request continued support for funding the ASRM program in NASA's fiscal year 1994 budget.

Mr. Chairman, and Members of the Committee, all of these projects mentioned today have significant, long-term economic impact as well as provide the opportunity for jobs. The citizens would be the ultimate recipients of the project's benefits.

Mr. Chairman, we would be remiss in our pursuit of economic excellence if in appearing here today we did not address another issue of concern even though it doesn't come directly under this Committee. This issue is the proposed fuel tax for barge/towing companies.

The proposed fuel tax will reportedly mean a 500 percent increase for barge transportation companies. This would amount to a sum more than the total revenues of the majority of existing barge/towing companies. The economic impact of this proposed fuel tax is not limited to the barge/towing industry alone. Business and industry who rely on water transportation to ship raw bulk materials and finished products cannot absorb such a high increase in their transportation costs and continue to remain competitive. Also, grain and coal exports would be tremendously affected by these high transportation costs and would no longer be able to compete on an international market effectively.

This country was founded on our great inland waterways. It is the lifeline of this country to the rest of the world and plays a major role in world trade. Our region and nation has developed and grown industrially and economically based on the availability of water transportation. We sincerely urge, Mr. Chairman, that Members of Congress, give thoughtful consideration to this issue.

Mr. Chairman, we appreciate the excellent work of this important Committee. it is an honor to have the opportunity to appear before you today and we respectfully urge that the Committee give thoughtful consideration to our requests. Thank you.

FACT SHEET

PICKWICK CHANNEL: TROUBLE ROUND THE BEND

It's a tight squeeze for tows on the Tennessee River just below Pickwick Lock near Savannah, TN. The problem lies in a 5-mile long bend in the river known as "Big Bend Shoals." It is here that one-way barge traffic must navigate a 300 to 350 foot-wide channel along a sharp underwater rock ledge. The channel, built in 1937 as part of Pickwick Landing Dam, is much too narrow for today's bigger tows. But there are more serious problems. The swiftness of the current, the sudden fluctuations of water levels, the potential for towboats to swing their barges out of the channel over the underwater rock ledge increase the risk for grounding and possible toxic or hazardous spills. The Coast Guard warns of a growing safety problem. In addition, barge traffic through Pickwick increases every year, especially since the opening of the Tennessee-Tombigbee Waterway.

TVA records show tows began having trouble in this channel as early as 1942. Since 1983, there have been 18 groundings and one collision reported to the Coast Guard; the Pickwick lockmaster has logged several more. Most of these groundings have occurred in a 1.8 mile stretch of channel between TRM 204.0 and 205.8, an area where the Coast Guard experiences a continuous problem keeping channel marker buoys on station.

Widen and deepen the channel in the problem area between TRM 204.0 and 205.8. This additional width would vary from a maximum 160 feet in the apex of the bend to where the modified channel would merge with the existing channel. The depth of the cut would vary from 0 to about 7 feet, involving the removal of about 145,000 cubic yards of rock, gravel and sand.

Work would be spread over 2 years, since dredging would be suspended during fish spawning season (March–June.) Since the site is located in a designated mussel sanctuary, mussels would be relocated before dredge work begins.

Approximately $10 million. TVA plans to relocate the mussels in late Summer or early Fall 1993. If there is demonstrated public support for the project, it is expected funding for actual channel widening would come from Federal appropriations through TVA.

Barge transportation is the safest, most economical transportation available today, especially for chemicals, coal, grains, wood products, petroleum, etc. and traffic is increasing steadily at Pickwick. In 1991, annual tonnage was 18,419,000; by 1995, the figure is expected to grow to 26,000,000. In addition, tow size has increased and barges are bigger (the 35 by 195 foot jumbo barge is commonly used on the waterway today) and there is a clear responsibility to protect the environment by removing the rock ledge and its potential for spill accidents.

CHICKAMAUGA LOCK: THE PROBLEM, THE OPPORTUNITIES

Chickamauga Lock, near Chattanooga, TN, is one of the oldest and smallest (60′ by 360′) locks on the Tennessee River. Only Watts Bar and Ft. Loudoun are as small. Completed in 1937, the aging lock is showing signs of severe structural deterioration. It is plagued by concrete growth, in need of constant repair and is a source of extreme hardship and high cost for upstream businesses which employ thousands of workers. The present lock also creates problems for recreational boating. The time has come for major decisions regarding the future of Chickamauga Lock.

(1) Major repairs to the present lock with no additional facilities added or (2) construction of a larger, modern lock like those below Chattanooga. If the decision is to do repairs only, the present lock will be closed to all traffic for about two years. During construction of a new lock, the existing lock could remain open.

Approximately 10 years, with the necessary funding. Engineering design could begin upon completion of a detailed feasibility study which is now underway and scheduled for completion in late 1993.

About $196 million (1992 dollars). It is expected funding would come from Federal appropriations, if there is demonstrated public support for a new lock.

The proposed new 110′ by 600′ lock would be constructed on the river side of the existing lock. The new lock could accommodate a modern eight-barge tow in a single lockage. The existing lock could be used as an auxiliary.

Because of the current "one-barge-at-a-time" lockages at Chickamauga, rates for commercial traffic above Chattanooga are approximately double those below Chickamauga. Currently, it takes an average eight-barge tow about eight hours to pass through Chickamauga Lock as opposed to one hour through the newer, larger locks downstream.

A new lock and the auxiliary lock would cut delays and congestion. Recreational traffic adds substantially to the area economy every year, with special events like the River Bend Festival, Fall Color Cruise and the "Vol Navy."

LOUDON RAILROAD BRIDGE SPANNING THE 21ST CENTURY

An old railroad bridge is getting a makeover at Loudon, TN. Work on the Norfolk Southern Railway Company bridge at mile 591.3 across the Tennessee River is nearing completion. This modernization project is a joint undertaking between the railroad and TVA. The railroad, faced with structural problems on the aging bridge, is replacing all 11 spans. TVA's special concern is widening one of these spans—the navigation channel span—to improve navigation on the river.

The bridge was built in the mid-1800's. Its longest span was positioned over the original river bed which follows along the rock bluff on the left descending bank. Over the years, as tow and barge sizes have increased, the bridge has become one of the three most restrictive points on the entire Tennessee River. Its horizontal clearance for navigation is only 164 feet, less than one-half of the 350-foot standard for Tennessee River bridges.

Two other major problems exist: (1) The bridge's location in the outside portion of a bend in the river requires towboat pilots to steer at an angle across the channel toward the rock bluff, then conduct a flanking maneuver to keep the tow in the channel while passing through the navigation span. (2) The channel span in the railroad bridge does not align with the channel span in the highway bridge about 0.3 miles upstream. As a result, pilots must exercise extreme caution. Some choose to "double trip" their tows through the bridge to avoid possible accidents.

During 1993, Norfolk Southern Railway will complete replacing the 11 spans, increasing the horizontal clearance of the channel span from 164 feet to 267 feet. The navigation channel bottom through the new span will also be widened. Dredging will involve removal of about 2,100 cubic yards of material from the river bottom in an area 450 feet long, to 175 feet wide, and to 3 feet deep.

The project is scheduled for completion in summer, 1993.

Total cost of the makeover is $12 million. TVA's share is $2.7 million. Under the TVA Bridge Act, TVA will reimburse the railroad for additional costs of improving the navigation channel. Reimbursement is spread over a three-year period. TVA's last payment will be paid in early fiscal year 1994.

This project is an excellent example of TVA's partnership with the private sector. On completion, the updated bridge will improve navigation as well as remove rail car weight and train speed restrictions.

Kentucky Lock Addition

PROJECT UPDATE

Proposed project

Construction of a 110′x1,200′ new lock chamber adjacent to the existing lock at the Kentucky Project On the Tennessee River. Cost is $448,000,000 in Oct 92 dollars. One-half of the construction funds would come from the Inland Waterways Trust Fund. The project would create about 500 jobs during the peak seven years of construction. The project has a 1.7 to 1 B/C.

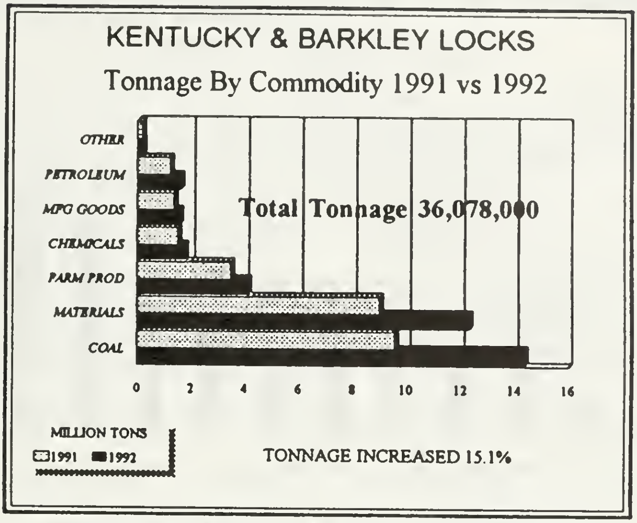
The problem at Kentucky Lock

Most barge traffic uses Kentucky Lock instead of nearby Barkley Lock because the lower Tennessee River below Kentucky Lock is $0.50/ton cheaper than the narrow, sinuous, 50% one-way traffic lower Cumberland River below Barkley Lock. The Kentucky Lock/Tennessee River route is cheaper, faster and much safer to navigate. This causes congestion and delay at Kentucky Lock.

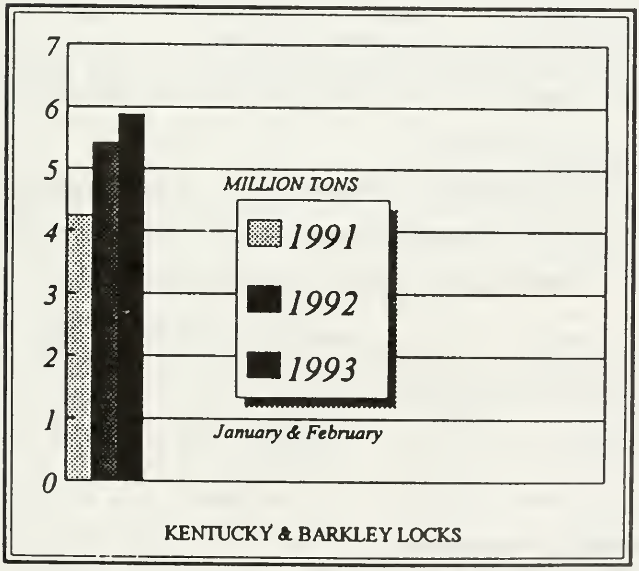
In addition, Kentucky's 600′ chamber is too small to handle a modern 15-barge tow without two lockages. This greatly increases the processing time and further compounds the problem of congestion and gives Kentucky Lock one of the highest transit times in the inland waterways. Transit times through either Kentucky or Barkley Locks are significantly increased when either lock is closed for maintenance.

Status

The Feasibility Report has been approved by the Chief of Engineers and is now in the hands of the Secretary of the Army for Civil Works awaiting recommendation to Congress for authorization. The next step is authorization in the 1994 Water Resources Development Act. Congress appropriated $500,000 in fiscal year 1993 for continued design and engineering. The ASA(CW) has directed that these funds be expended for reanalysis of several aspects of the project formulation.



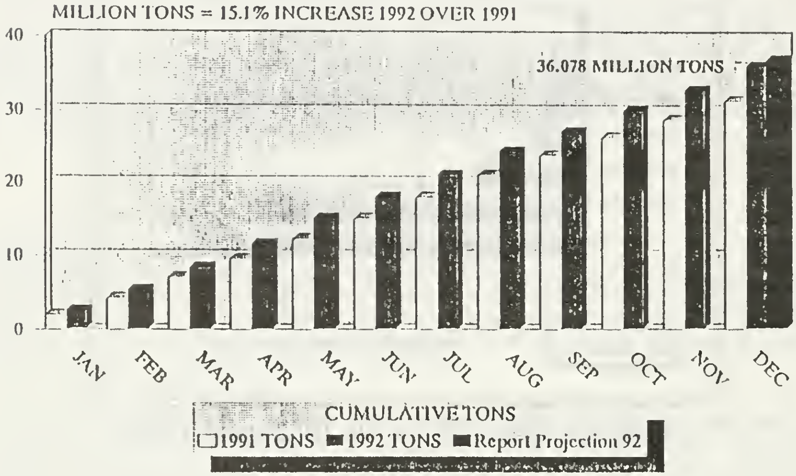
Tonnage grew 15.1% in 1992 over 1991.



Jan+Feb 1993 tonnage grew 8.6% over 1992 and 38.5% over 1991.

KENTUCKY & BARKLEY LOCKS

Tonnage In 1991 vs 1992



ADDITIONAL PREPARED STATEMENTS SUBMITTED FOR THE RECORD

Senator JOHNSTON. That brings our hearings with public witnesses and Members of Congress to a close.

The record will remain open until April 20, and any additional statements received by the committee will be incorporated in the record.

[The statements follow:]

UPPER MISSISSIPPI RIVER FLOOD CONTROL PROJECTS

STATEMENT OF UPPER MISSISSIPPI FLOOD CONTROL ASSOCIATION

SUMMARY AUTHORIZED PROJECTS UNDER PUBLIC LAW 99–662

Projects	Estimated costs	Budgeted fiscal year 1994	Requests	Remarks
South Quincy Drainage and Levee District, IL (flood control):				
Federal funding	$7,155,000			Completed.
Non-Federal funding	2,395,000			
Green Bay Levee and Drainage District No.2, Iowa: Federal funding.	5,760,000	Unknown		Reauthorized.
Muscatine Island Levee and Drainage District, Muscatine Louisa Co. Drainage District No. 13, Iowa (construction):				
Federal funding	6,450,000	Not represented by our association.		See discussion.
Non-Federal funding	2,150,000			

Three of our twenty-four Member Districts were recommended for increased flood protection under PL 99–62. They are the South Quincy Drainage and Levee District, Illinois; Green Bay Levee and Drainage District No. 2, Iowa; and Muscatine Island Levee District and Muscatine Louisa County Drainage District No. 13, Iowa.

A brief status report is as follows:

South Quincy Drainage and Levee District flood control project

This project has been completed as reported in 1991. Our Association is happy to report that since the completion of this Flood Control project at a federal cost of approximately $6,000,000 and a sponsor cost of approximately $2,250,000, there has been ongoing industrial expansion in excess of $35,000,000 and ongoing infrastructure improvement. (Sewer, Water, etc.), in excess of $1,200,000 for Phase total phased work $6,000,000.

This is a return on federal investment on a ratio of 6:1 in two years and approximately 7:1 within the very near future.

Green Bay Levee and Drainage District No. 2, Iowa, flood control project

This project has been reauthorized as set forth in Water Resources Development Act 1992 (WRDA 92), HR 6167. Since this project has lain dormant for over five years, it would appear necessary to conduct a general re-evaluation of all aspects of the project. The Drainage District has agreed to cost share in the project.

We respectfully request an appropriation of $250,000 to conduct the study in fiscal year 1994.

Muscatine Island Levee District, Muscatine-Louisa County Drainage District No. 13, Iowa, and the Muscatine City-Muscatine Island Flood Control Commission

This project is herein referenced because it constitutes one of the three projects recommended for improvement under PL 99–662 and at that time was an active member of our Association. Our Association is no longer privy to speak for this project and therefore have no comment to make.

SPECIAL STUDIES

South River Drainage District (Missouri)

The South River Drainage District, in conjunction with the Marion County Missouri Port Authority in 1991, requested a Reconnaissance Survey by the C.O.E. to determine the feasibility of raising approximately 7.2 miles of the South River Mississippi River Levee to afford increased protection to approximately 10,000 acres of agricultural land and access to the American Cyanamid Plant, a large industrial plant, and other industrial park facilities. The improved levee would afford protection to a proposed barge terminal port facility. The Reconnaissance Survey by the Corps of Engineers of the Rock Island District is still under review.

We understand that there is a question whether or not "Lost Labor" constitutes a viable factor in cost/benefit analysis. Since the State of Missouri and Marion County Missouri are interested in constructing a Port Facility within the South River Drainage District, such a facility should enhance the general economy of the area. One would expect this to lead to employment and the general well being of the area. If this South River Flood Control project even remotely returns a Federal Investment ratio approaching that of the South Quincy project, it will prove to be a boon to the area's economy and a stimulus to employment.

Upper Mississippi River navigation study

Our Association is very interested in the Navigation Study. An efficient, well managed, adequate inland waterway is vital to the economic and social well being of the entire Upper Mississippi River Valley. We recognize that the navigation system is some 50 years old and many of the Lock Facilities are in need of repair or replacement. Double lockage problems with large barges cause time delays. The need for greater and more efficient lockages will undoubtedly occur. Our Association believes that barge traffic will increase as the years go by. This nation cannot become static, it must grow.

We respectfully request that your Honorable Committee continue to fund this Study to the full capability of the C.O.E. Our Association is agricultural in nature and as such have a primary interest in getting grain to the market and return commodities upstream as economically as possible. We are concerned that too high fuel cost to the Barge Industry will result in a tax on agriculture. Most of the cargo up and down the river is agriculturally related or directly involved.

Special interest stream bank erosion

This statement is repetitious but vital. During the past several years, members of our Association continue to express concern over river bank erosion. When the Upper Mississippi River Navigation System was constructed in the 1930's, it was our Association's view, and still is, that the then existing private levees became a part of the Navigation System, all tied closely to the economic welfare, human lives, recreation, and environment of the entire region. As the years have passed, the Mississippi River in its natural meandering action has tended to erode certain bank areas until some long existing levees are becoming endangered. "A stitch in time saves nine."

Our Association recognizes that bank erosion problems, if fully addressed, could become a major costly nationwide endeavor. However, there would appear justification for paying special attention to the Upper Mississippi River Navigation System. One major justification being that many of the Upper Mississippi River Lock and Dams are anchored in levees on both sides of the river, which levees were originally constructed entirely with local funds by the Drainage Districts and other public and private parties.

There seems to be a Federal perception that since the Federal Government strengthened the existing levees from Hamburg Bay to Guttenburg, Iowa under the 1954 Flood Control Act and similar acts, and the Drainage Districts signed assurances that they would operate and maintain the levees in accordance with the dictates of the Secretary of the Army of the U.S. Government, the responsibility of shoreline protection, as it relates to the levees, rests on the shoulders of the Drainage Districts.

The Districts feel that assuming the responsibility of keeping the River in its channel is beyond the scope of the intent of the Federal Levee Improvement Assurance Agreements.

In light of the above, our Association solicited the aid of Congressman Richard Durbin of Illinois, who kindly with the co-sponsorship of 100 percent of the Congressmen from the affected tri-state area, namely Congressmen Michel and Evans of Illinois; Volkmer of Missouri; Leach and initially Tauke of Iowa, introduced H.R. 992 for Congressional consideration.

H.R. 992 did not fly. In order to expedite the problem, Congressman Durbin introduced a Resolution in the House directing the C.O.E. to make a Reconnaissance Survey at an estimated cost of $250,000. A similar Resolution was introduced in the Senate by Senator Grassley in the amount of approximately $180,000. On September 24, 1992, Congressman Robert A. Roe, Chairman of the Committee on Public Works and Transportation introduced Docket 2406. Our Association now understands that Docket 2406 supersedes the two prior resolutions and that the Corps of Engineers now waits on funding for Docket 2406.

We are not privy to just how and what can be done to initiate the repair or rehabilitation work on endangered levees, but it is obviously not a new start. It constitutes repair to an existing structure constructed jointly by the Drainage Districts and the Corps of Engineers. Some of the endangered levees, or structures needing repair were originally constructed by the Federal Government as navigation projects. Since the eroded levee sections have been pinpointed and are visually apparent, it would seem logical to Design and Construct if such authority and appropriation can in some manner be secured. If not, we respectfully request that your Honorable Committee fund Document 2406 in the amount of $250,000 or to the full capability of the Corps of Engineers to perform.

Thank you for your consideration. It is a privilege to present this testimony.

UPPER MISSISSIPPI RIVER ENVIRONMENTAL PROGRAMS

Statement of the Upper Mississippi River Basin Association

The Upper Mississippi River Basin Association has testified for the past seven years in support of the Environmental Management Program (EMP) on the Upper Mississippi River. It is with tremendous pleasure that we once again present testimony on this unique program.

The Association is pleased that the Clinton Administration's fiscal year 1994 budget proposal includes the full authorized annual funding level for the Environmental Management Program of $19.455 million. As the EMP matures, full funding has grown exceedingly important because the original authorization made no provision to accommodate inflation nor did the original framework of the program account for the necessary administrative costs. In addition, the annual application of savings and slippage has a particularly deleterious effect on the non-construction components of the program such as the long term resource monitoring effort. The combination of these factors severely constrains the capacity of the EMP to fulfill all of its originally conceived purposes. It is therefore increasingly important that the program be funded to the full extent of the authorized appropriations.

The Upper Mississippi River Basin Association, established by the Governors of the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, serves as the primary regional forum for the implementation of the EMP. This fact is indicative of the partnership framework upon which this program is built. As we have so frequently emphasized, this collaborative approach is one of the strengths of the EMP. The Corps of Engineers, U.S. Fish and Wildlife Service, and the five basin states have worked diligently to make this partnership a strong and viable one. In support of this year's funding request, we would offer the following observations:

ECONOMIC STIMULUS

A substantial portion of the annual funding for the Environmental Management Program (EMP) is devoted to construction of habitat rehabilitation and enhancement projects. Since the inception of the program, nearly $22 million has been invested in the construction of these projects throughout the river system. In fiscal year 1993 alone, an additional $9.3 million is scheduled for construction activities. While the Clinton Administration has not, to our knowledge, identified this particular program as part of its economic stimulus or infrastructure investment plan, the EMP clearly contributes to river communities' economic activity by providing business opportunities for local dredging and construction firms. As Congress and the Administration search for opportunities to enhance investments in environmental infrastructure, it should be noted that the EMP has provided such benefits for a number of years and will continue to do so in the future.

A PROVEN PROGRAM

The Environmental Management Program is having substantial beneficial effects on the river ecosystem. Last fall the Commander of the North Central Division of the Corps of Engineers completed a "midterm evaluation report" on the EMP. In his transmittal of that report to Headquarters, General Russell Fuhrman noted that "the UMRS–EMP has proven itself a valuable program yielding far reaching results. The EMP brings together traditionally competing Interests into partnership for the mutual good."

One of the major components of the EMP is the construction of projects to rehabilitate, enhance, or protect habitat areas. Each of the projects (varying in size and ranging in cost from about $200,000 to $6 million) employs different types of techniques, including such things as dredging to remove sediment, dike or levee construction, island creation, water control systems, and side channel closures or openings. In the Corps' midterm evaluation report, they concluded that "habitat projects are highly successful in alleviating sedimentation in the specific project areas."

Despite funding shortfalls of over $20 million in the early years of the habitat projects program, the construction of 13 habitat projects has been completed and another 5 projects are under construction. In addition, 11 projects have been designed and are awaiting construction approval or contract award. Twenty-three more projects have design work underway. The 29 projects which are either complete, under construction, or pending construction approval will benefit a total of 22,000 acres of habitat within the river system. These acres include a variety of habitat types such as backwater sloughs, marshes, island wetlands, nesting islands, barrier islands, side channels, and both backwater and river lakes.

Similarly, the Long Term Resource Monitoring component of the EMP is proving itself highly successful and tremendously useful to both federal and state river management agencies. At the Environmental Management Technical Center, which is the headquarters for the monitoring program, a multi-disciplinary team of scientists conducts both field and laboratory research on a wide range of ecological issues. In addition, spatial analysis is supported through geographic information system (GIS) software, air photo interpretation, hydrographic data acquisition, and remote sensing. The Technical Center also supervises the 6 field stations which routinely collect standardized data on water, sediment, fish, and vegetation at over 150 sites.

The ultimate benefit of this data collection, modeling, and analytical work is to assist river resource managers in their efforts to address the complex and dynamic changes in the ecosystem. Practical applications are already being demonstrated and the capabilities of the Technical Center are in high demand. As an example, the geographic information system technology at the Technical Center is being applied to hazardous materials spill response planning efforts under the Oil Pollution Act of 1990. The GIS capabilities will be tremendously helpful in identifying environmentally sensitive areas and devising contingency plans for responding to oil spills on the river.

Another example of the practical application of this system is its use in regulatory and on-going river management and maintenance activities. Studies undertaken by the Technical Center on the spatial distribution of phosphorus concentrations downstream of the Twin Cities sewage treatment plant have been used to inform decisions on permitting requirements. Similarly, the Corps of Engineers is currently evaluating how the data and analytical capabilities at the Technical Center can be applied to their Section 404 wetlands regulatory functions, channel maintenance responsibilities, and other Corps missions. The Corps already uses the modelling technology at the Technical Center in the design of some EMP habitat projects. As an example, a variety of land and aquatic habitat coverages were produced to assist Corps planners in determining what levee heights will maximize habitat protection at the Calhoun Point project in Pool 26.

ON THE CUTTING EDGE

The EMP also contributes to the demonstration, advancement, and understanding of new scientific approaches and innovative habitat protection techniques. As the midterm evaluation report concludes, "the habitat project planning teams in the Districts have made great strides in refining and applying habitat models of representative target species to the formulation of projects. By comparing habitat gains with costs, an incremental analysis for each proposed project identifies the most cost-effective plan. There is little specific guidance for the incremental analysis of habitat projects, and the EMP is advancing the state of the art/science."

Likewise, the Long Term Resource Monitoring program is on both the national and international scientific frontier of spatial data analysis and modelling. This technology will be used to generate historic "pictures" of how the river has looked over time. These visual displays of vegetative coverage and aquatic habitats can then be used by resource managers to formulate ecosystem management goals for the future. Information management specialists at the Technical Center are currently working on establishing communication networks that will provide state and federal management agencies throughout the region with direct access to the Upper Mississippi River data base. Such a system appears to be precisely what President Clinton has advocated as "information highways" to revitalize the nation's technological infrastructure.

BALANCED MANAGEMENT

The Corps of Engineers has just embarked on a major six year feasibility study of the Upper Mississippi and Illinois River navigation system. The outcome of this effort may well be recommendations for replacement or addition of a number of locks on the river. With the prospect of such an expansion of the navigation system looming on the horizon, it is particularly important that we aggressively proceed with the EMP. The states in the basin intend to work with the Corps to insure that the navigation studies adequately address the environmental effects and opportunities associated with navigation system expansion. However, it is essential to the multi-purpose management framework which Congress has set forth for the river that proactive environmental protection efforts proceed simultaneously.

In addition, there is a direct and synergistic relationship between the Upper Mississippi-Illinois Waterway Navigation Study and the Long Term Resource Monitoring component of the EMP. Current plans suggest that the navigation study will rely heavily upon the EMP Technical Center's data management capabilities, impact assessment research, and system-wide spatial information in conducting the navigation impact analyses and environmental studies that are part of the navigation study. The Corps has noted in its EMP midterm evaluation report that their "goal will be to leverage navigation study funds against the EMP investments already made, as well as those in the future. Over $5 million has been or is scheduled to be expended for products complementing the Upper Mississippi—Illinois Waterway Navigation Study." If the EMP monitoring program is to fulfill its anticipated contributions to that navigation study, it is important that the full extent of the authorized annual appropriations be provided.

CHALLENGES AHEAD

The absence of funding for the recreation projects that were authorized in 1986 as part of the Environmental Management Program is a matter of continuing concern. For the past seven years, as a result of the Administration's policy that recreation does not constitute a high federal priority, no EMP funds have been devoted to recreational development. Many of the states in the region remain concerned that this deficiency in the EMP compromises the multi-purpose management philosophy upon which the program is based. We remain hopeful that the program will eventually be expanded to include the construction of 50 percent cost-shared recreation projects.

In closing, we thank this subcommittee for your past support and urge you to reaffirm that commitment by providing full funding for the EMP in fiscal year 1994. Despite the fiscal constraints under which you labor, you have always generously supported this program. We can all take great pride in building the EMP to reflect the vision Congress had when the program was first authorized in 1986.

GLACIAL LAKE RESOURCE INSTITUTE

STATEMENT OF DR. KEITH G. BRISCOE, PRESIDENT, BUENA VISTA COLLEGE

Mr. Chairman and distinguished members of the Subcommittee, I appreciate the opportunity to submit written testimony for the Record to the Senate Appropriations Subcommittee on Energy and Water Development on behalf of Buena Vista College.

In the following testimony, I wish to inform you of an important initiative that Buena Vista College is undertaking which we believe is both timely and critical to the future quality of rural America's most precious commodity—water. The need for clean water has been and remains the single most critical natural resource issue confronting the United States and the world. Over the years, we have witnessed the increasing pollution of groundwater sources, the depletion of clean water sources, the increased utilization of water for industry, waste disposal, recreation, and agriculture, the very life line of rural America. In addition, population concentrations in arid regions and changing climatic situations worldwide, have placed water issues at the forefront of the debate over the nation's environmental policy.

With the increasing competition for and growing scarcity of fresh, clean water in America, there is an urgent need to better understand the relationship between lake conservation and lake utilization, the role of agriculture and industry, and the dynamics of policy and economy in water issues. The country's failure to address these questions can be readily seen in numerous Corps of Engineer projects designed to salvage lakes experiencing eutrophy.

Erosion and flooding, particularly after heavy rainfall, has contributed to the eutrophication which plagues Storm Lake. Storm Lake is Iowa's third largest lake and of the lake's 17,000 acre watershed, approximately 80 percent (14,560 acres) is cropland in a primarily corn/soybean rotation. The remainder of the acreage is urban and transportation corridors. Like many lakes throughout America, Storm Lake is used for fishing, boating and many other recreational activities. Storm Lake is also at the critical head of a system of water that provides water to the Des Moines area approximately 250 miles south of Storm Lake.

Over the past years, the quality of the water in Storm Lake has consistently deteriorated. This is evidenced by the increasing frequency of algal bloom during the summer months. Sediment build-up due to soil erosion from the surrounding farm land has been a significant contributor to the decline in aquatic life and water quality. Storm Lake has been dredged twice in the past due to accumulated sediment. This cycle of dredging followed by siltration then dredging again offers no long-term solutions to the problems of sedimentation.

Clearly, water runoff and flood control pose significant challenges to efforts to improve the quality of the water in Storm Lake. Land management, or the absence of it, has become a critical issue in runoff and flood control problems.

Due to the poor water drainage and massive floods that the Lake experiences, Storm Lake has been littered with profuse amounts of chemical pollutants that have virtually transformed Storm Lake from a bountiful body of water enjoyed by many to an unpleasant, polluted lake inhabited by few. This story repeats itself in lake and river front communities across the country.

Flooding and poor drainage has resulted in massive devastation across the heartland of America. For instance, eight acres of prime top soil float past Memphis every hour. The Mississippi River acts as a mode of transportation for millions of tons of topsoil from farms across its' surrounding region. Iowa, for example, once had an average of sixteen inches of the finest topsoil in the world; now that average is down to eight inches. The rest is believed to be somewhere on the bottom of the Gulf of Mexico. As flood waters carry these enormous quantities of soil into waterways, chemicals and pesticides that were used on land for various purposes, become deposited in the water that millions of Americans depend upon for drinking.

As you well know, there is a consensus in America that our water supplies are at a grave risk. The future of this natural resource is threatened if expeditious action is not taken soon to study ways that land in rural America can be utilized in a fruitful manner without destroying a resource that our very livelihood depends upon.

Water quality has become a problem that the citizens of Storm Lake have come to understand firsthand. In Iowa, and in many communities across the country, groundwater is a vital natural resource. Groundwater is the source of drinking water for the majority of Iowans. In 1985, 53 percent of the nation's total population used groundwater as their source of drinking water. In rural America, nearly all of the population's drinking water supply came from groundwater. In a number of areas across the country, the quality of groundwater has been degraded to unacceptable levels. For example, during a recent study, it was found that 33 percent of 700 wells in Iowa and 30 percent of 500 wells tested in Minnesota were infected with various pollutants. In the past, Iowans have been able to use groundwater for various purposes without having to treat the water first. The continued health, welfare and economic prosperity of all Iowans is dependent upon clean groundwater sources.

In order to better understand water quality and its relationship to land usage, the City of Storm Lake, in close collaboration with Buena Vista College and regional agribusinesses, is planning to establish a Glacial Lake Resource Institute. The Institute will be located at Buena Vista College given the capabilities of the College for such an initiative, and its prime location on Storm lake.

Storm lake is a natural, glacial lake of 3,080 acres. The lake, surrounded by a heavy agricultural industry and meat processing plants, offers a natural laboratory in which to study water quality and how it is affected by the land surrounding it. In general, the Institute will perform an increasingly important task in the fight to improve the quality of our nation's waters. The Institute will undertake a comprehensive approach in addressing water quality control problems as they relate to land management.

Specifically, the Lake Resource Institute will address major concerns of the City of Storm Lake related to land use and the effects of the agricultural and industrial activity. The Institute will serve as a conservation education center to help farmers understand the environmental impacts of modern agricultural techniques and technology, and will develop systems and procedures for regional businesses, real estate developers and governmental highway departments.

The Institute will offer a holistic approach to environmental water predicaments, in that it will study the land surrounding Storm Lake and the water within the lake itself and attempt to eradicate the numerous problems that lead to the devastating pollution that enters the water. Such information will offer solutions to land management difficulties and a better understanding of siltration and sedimentation. This information will then offer adequate methods of returning healthy aquatic life to this once vibrant body of water.

The Institute and research will serve as a model for the Corps of Engineers and will supply the Corps with much needed information that can be disseminated across America to assist in the solution to land management problems across America.

The new facility that will house the Lake Resource Institute will contain state-of-the-art laboratories and modern scientific instrumentation that will enhance the region's preparedness to conduct the type of lake and inland water supply studies and education that are necessary to solve some of the nation's most pressing natural resource questions. In all, the Institute will perform a critical and logical task. Before offering solutions to the problem, it will first attempt to understand the problem.

With the effects of soil erosion, flooding and poor drainage threatening the livelihood of water supplies, the need for research and education become increasingly imperative. As the American population grows and farms expand in size, the imperative to understand and manage land use becomes more critical. Through the partnership with the City of Storm Lake, the Glacial Lake Resource Institute at Buena Vista College will supply the local community and the nation with urgently needed information regarding the various problems related to rural land management and its impact on preserving the quality of aquatic life and recreational activities on Storm Lake.

The City of Storm Lake has a very close relationship with Buena Vista College. It has provided excellent support to the institution, its programs and people. Civic organizations such as the Lake Preservation Association have used the College's lake study resources to prepare conservation measures. Likewise, the College provides regular monitoring and consulting services to the City Sewer and Water Department. The City recognizes the importance of the Lake to its own well being and is prepared to offer the College its full support in investigations aimed at Storm Lake.

Mr. Chairman, I ask for your serious consideration and support of this initiative within the fiscal year 1994 Energy and Water Development Appropriations bill. Buena Vista College has shown its interest in understanding the land use problems and their effects on Storm Lake by dedicating its substantial campus facilities and the land required to build the Institute. The Glacial Lake Resource Institute will require new highly sophisticated laboratories and new instrumentation and equipment. A federal partnership is requested in the amount of $7.2 million in order to complete this initiative.

Thank you, Mr. Chairman and members of this Subcommittee, for the opportunity to submit written testimony for the Record.

CHICAGO AREA PROJECTS

Statement of the Metropolitan Water Reclamation District of Greater Chicago

On behalf of the Metropolitan Water Reclamation District of Greater Chicago (District), I want to thank the Subcommittee for this opportunity to present our priorities for fiscal year 1994 and, at the same time, express our appreciation for your support of the District's projects in years past. The District is the local sponsor for three Corps of Engineers priority projects of the Chicagoland Underflow Plan: the O'Hare, McCook and Thornton Reservoirs. We are requesting the Subcommittee's full support for these vital projects. Specifically, we are asking that $18 million be included for these projects in the Subcommittee's Energy and Water Development Appropriations Act for fiscal year 1994. The following text outlines these projects and the need for the requested funding. Also, attached is a booklet indicating the municipalities in our area which benefit from these projects. The booklet reviews the history of the issues involved, including newspaper articles and pertinent data from the Corps of Engineers and the Illinois State Water Survey.

CHICAGOLAND UNDERFLOW PLAN

The Chicagoland Underflow Plan (CUP) consists of three reservoirs: The O'Hare, McCook and Thornton Reservoirs. The O'Hare Reservoir Project was fully authorized for construction in the Water Resources Development Act of 1986 (P.L. 99–662). The authorization provides for the construction of a 1,050 acre-foot floodwater storage reservoir which will be connected to the existing O'Hare segment of the District's Tunnel and Reservoir Plan (TARP). Adopted in 1972, TARP was the result of a multi-agency effort which included officials of the State of Illinois, County of Cook, City of Chicago and the District. TARP was designed to address the overwhelming water pollution and flooding problems in the Chicagoland area. These problems stem from the fact that the capacity of the area's waterways had been overburdened over the years and had become woefully inadequate in both hydraulic and assimilative capacities. These waterways were no longer able to carry away the combined sewer overflow discharges nor were they able to assimilate the pollution associated with these discharges. Severe basement flooding and polluted waterways, (including Lake Michigan which is the source of drinking water for millions of people) was the inevitable result. We point with pride to the fact that TARP was found to be the most cost-effective and socially and environmentally acceptable alternative for reducing these flooding and water pollution problems.

The plan called for the construction of new "underground rivers" beneath the area's waterways. The "underground rivers" would be tunnels up to 35 feet in diameter and 350 feet below the surface. To provide an outlet for these tunnels, reservoirs were to be constructed at the ends of the tunnel systems. Over 51 miles of tunnels have been constructed at a cost of $1.2 billion and are operational. These tunnels capture the majority of the pollution load by capturing all of the small storms and the first flush of the larger storms. Another 34 miles of tunnels costing $668 million are under construction. The tunnels currently have no place to discharge when they fill up during large rainstorms because the O'Hare, Thornton and McCook Reservoirs have not been built yet. Without these outlets, the local drainage has nowhere to go when large storms hit the area. Therefore, the combined stormwater and sewage back up into over 550,000 homes.

O'HARE RESERVOIR—CHICAGOLAND UNDERFLOW PLAN

The O'Hare Reservoir project is the first component of CUP, the Corps' reservoir plan. Understanding the severe flood threat to the densely populated north central Cook County area, Congress authorized the project in 1986. The project's 1,050 acre-feet of storage is the optimum cost-effective storage capacity for flood control purposes. In the Fiscal Year 1990 Energy and Water Development Appropriations Act, Congress provided $1.5 million in first-year construction funds for the O'Hare Reservoir and specified that the reservoir be built to at least 1,050 acre-feet in size as authorized, and in full accordance with the cost-sharing percentages specified in Section 103(a) of the Water Resources Development Act of 1986. The Fiscal Year 1992 Energy and Water Development Appropriations Act provided $4.0 million in third-year construction funds to continue construction on the O'Hare Reservoir project and contained language directing the Corps of Engineers to award continuing contracts until construction is completed. As we stated last year to this Committee, the District is the local sponsor for this project and is fully committed to it. The District has already purchased the necessary land at a cost of $4.2 million and will spend $1.3 million for utility relocation. The District will continue to meet its remaining cost-sharing obligations under the law.

Based on the present high flood risk and potential damage due to inadequate channel capacity, we, along with our supportive congressional delegation, are urgently requesting that the Subcommittee include $5 million in construction funds to continue critical construction work on the O'Hare Reservoir project in the Fiscal Year 1994 Energy and Water Development Appropriations Act. With this funding, we will be completing the prototype reservoir for the overall TARP system. We are pleased to be completing this first fully operating element and bringing critical flood protection to the north central Chicagoland area, an area which has been ravaged in years past.

Based on two successive Presidentially-declared flood disasters in our area in 1986 and again in 1987, we believe the probability of this type of flood emergency occurring before implementation of the critical flood prevention measures is quite high. As the public agency for the greater Chicagoland area responsible for water pollution control, and as the regional sponsor for flood control, we have an obligation to protect the health and safety of our citizens. We are asking your support in helping us achieve this necessary and important goal of construction completion.

MC COOK AND THORNTON RESERVOIRS—CHICAGOLAND UNDERFLOW PLAN

The McCook and Thornton Reservoirs of the Chicagoland Underflow Plan (CUP) were fully authorized for construction in the Water Resources Development Act of 1988 (Public Law 100–676). CUP, as previously discussed, is a flood protection plan that is designed to reduce basement and street flooding due to combined sewer backups. These projects are the second and third components of CUP; they consist of reservoirs to be constructed in existing quarries at McCook in west suburban Chicago and Thornton in south suburban Chicago.

These reservoirs will provide a storage capacity of 46,700 acre-feet and will produce annual benefits of $75 million. The total potential benefits of these projects are approximately twice as much as their total cost. The District, as the local sponsor, is actively pursuing land acquisition for these projects and is prepared to meet its cost sharing obligations under Public Law 99–662.

These projects are a very sound investment with a high rate of return. They will enhance the quality of life, and the safety and the peace of mind of the residents of this region. The State of Illinois has endorsed these projects and has urged their implementation. In professional circles, these projects are hailed for their farsightedness, innovation, and benefits.

We take particular pride in the Thornton Reservoir because of our contribution to the project. Our staff saw reason to invest time and talent to review and evaluate the draft recommendations for the Thornton Reservoir, which the Corps of Engineers first released in February 1986. We are proud that our review and evaluation resulted in the formulation of proposals for design changes which can produce $24 million in savings to the taxpayers at large. These changes involved coordination and consultation between four agencies at the federal, state and local levels, and were welcomed by the Corps and incorporated in the final report.

We are pleased to advise that over the past year and in anticipation of a new construction start, the District reached an agreement with the present McCook landowner for the acquisition of the land needed for the McCook Reservoir. This milestone was achieved while the District worked with the Corps to ensure completion of the necessary design work to achieve a fiscal year 1994 new construction start, as Congress directed in the Conference Report on the Fiscal Year 1993 Energy and Water Development Appropriations Bill. Given the Corps' progress, Congress' direction and in order to provide critical flood relief, the District is urgently requesting that the Subcommittee include $53 million in new start construction funds for the

McCook and Thornton Reservoir project in the Fiscal Year 1994 Energy and Water Development Appropriations Act.

SUMMARY

Given the broad sweep of our jurisdiction and the severity of flooding in our area, the Corps was compelled to develop a plan that would compliment the uniqueness of TARP and be sizable enough to accommodate our service area. With a combined sewer area of 375 square miles, consisting of the City of Chicago and 51 contiguous suburbs, there are 550,000 homes within our jurisdiction which are subject to flooding at any time. Of these, 185,000 homes flood on a regular basis because of inadequate conveyance and outlet capacity. The annual damages sustained exceed $150 million. If these projects were in place, these damages could be eliminated. We must consider the safety and peace of mind of the two million people who are affected as well as the disaster relief funds that will be saved when these projects are in place. As the public agency in the greater Chicagoland area responsible for water pollution control, and as the regional sponsor for flood control, we have an obligation to protect the health and safety of our citizens. We are asking your support in helping us achieve this necessary and important goal. It is absolutely critical that the Corps' work, which has been proceeding for several years, be continued on schedule.

Therefore, we urgently request that $18 million be included in the Fiscal Year 1994 Energy and Water Development Appropriations Act to continue construction of the O'Hare Reservoir and to initiate construction of the McCook and Thornton Reservoirs.

Again, we thank the Subcommittee for its support of our projects over the years and we thank you in advance for your consideration of our requests this year.

JOINT STATEMENT OF VALERIE B. JARRETT, COMMISSIONER, CHICAGO DEPARTMENT OF PLANNING AND DEVELOPMENT; AND HENRY L. HENDERSON, COMMISSIONER, CHICAGO DEPARTMENT OF ENVIRONMENT

Mr. Chairman and members of the Senate Appropriations Subcommittee on Energy and Water Development thank you for the opportunity to present written testimony on funding needed for critical U.S.Army Corps of Engineers' projects:

Chicago Shoreline Protection Study Preconstruction Engineering and Design Request—$1.3 million.

Casino Pier, Preconstruction Engineering and Design, Request—$820,000.

North Branch of the Chicago River, Dredging, Complete Feasibility Study, Request—$150,000.

O'Hare Reservoir, Continue Construction, Request—$5 million; and McCook and Thornton Reservoirs, Construction, Request—$13 million.

Chicago shoreline protection study, preconstruction engineering and design; appropriation request: $1.3 million.—The U.S. Army Corps of Engineers was authorized in 1974 by a resolution of the House Committee on Public Works, to conduct a study of erosion problems along the Illinois shoreline. The purpose of the project was to investigate and evaluate flooding, storm damage, and related erosion problems while determining if any Federal interest existed for addressing these problems.

Though long and arduous, this study has documented Chicago's shoreline structures and facilities, infrastructure, revenue generating facilities, parks and beaches, which are in imminent danger of collapse, to be worth approximately $5 billion. If no action is taken, the magnitude of loss, at a rate of 25 to 35 feet per year, will go far beyond more than the surveyed 3,000 acres of park land and 24 miles of publicly owned shoreline.

To an estimated 160 million annual users the obvious losses are Lake Shore Drive, a federal highway and major travel route for daily commuters; Meigs Field, an airport located on the lake for ease of access to Chicago's business loop; a water purification plant serving more than 2 million residents in the City and 50 suburbs; several harbors; a wetlands/bird sanctuary; private property; and hundreds of public facilities, including some of the largest museums in the U.S. If no action is taken more than 8,500 jobs and $287,000,000 in revenue and sales will also be lost.

On the other hand, reconstruction of Chicago's deteriorating shoreline will boost the local economy by creating jobs and attracting more international business. For example, the Illinois Department of Commerce and Community Affairs considers the protection of Chicago's magnificent Lake Michigan shoreline vital to the future economic growth of the Chicago metropolitan region and the entire State of Illinois. They have found through surveys that Chicago's Lake Michigan shoreline's superior design and preservation is a fundamental requirement to guarantee continued growth of vibrant and diversified business sectors within the City of Chicago and throughout the State of Illinois. Chicago's accessible shoreline and well developed urban lakefront park system attracts world wide business to this area stimulating not only the City of Chicago and the State of Illinois but also the national economy.

The U.S. Travel and Tourism Administration reported the travel industry will be the leading employer in the State of Illinois by the year 2000. Those U.S. cities that are able to provide "quality of life" will guarantee a continued economic growth from regional, national, and international corporations seeking business opportunities in livable cities. Reconstructing Chicago's collapsing shoreline will help to ensure we all benefit from this great natural resource.

The final draft report concerning this study was submitted on January 27, 1993 to the Washington ACOE Headquarters and subsequently to the Assistant Secretary of the Army. It is anticipated that the feasibility report will be publicly released by May 1993. Following the required 30 day public review period, the District will modify the report based on public comments, and then submit it for final review to Headquarters and to the Assistant Secretary of the Army's Office. Upon approval of the report by the Chief of Engineers, the Assistant Secretary of the Army will present it to Congress.

The City of Chicago appreciates the efforts of the Chicago District Office of the Army Corps of Engineers and understands the required Army Corps procedures. However, the City of Chicago is facing an emergency situation. Current low lake levels are increasing the rate of deterioration. Preliminary study findings estimated major segments of Chicago's shoreline would last till 1998 and others till 2005. Despite predictions, however, revetments north of Fullerton Avenue recently collapsed over a distance of 500 feet. Structural deterioration is clearly advancing at a much greater rate than previously thought. Due to the severity and extent of damage, emergency repair measures will not suffice. Total reconstruction of the damaged shore edge is necessary.

The favorable approach, which was developed jointly by the Army Corps of Engineers, the City of Chicago, and the Chicago Park District, is a proven structure known as step stone revetments. This design consists of steel pilings at the lake edge with large cut stone blocks ascending landward in a step like pattern. It has a minimum design life of 50 years, and a probable life of 100 years. It is very reliable and requires minimal maintenance. Furthermore, it provides easy and safe access to the lake edge.

Total project cost is estimated at $187 million. Federal share of the project is $100.7 million. It is critical to begin work just as quickly as possible since construction may take 10 to 15 years to complete.

$1.3 million appropriation for fiscal year 1994 is required for preliminary engineering and design work. This includes conducting soil borings, condition surveys, and other engineering related investigations relative to the existing structure. It is vital that the design work proceed as soon as possible to assure that work can begin before the structures protecting the shore totally collapse, destroying landward facilities and increasing the total costs significantly. A delay could be very costly, particularly if there are severe storms. For this reason, the City urgently requests federal funds for preconstruction engineering and design prior to project authorization.

Casino Pier preconstruction engineering and design; appropriation request: $820,000.—The City of Chicago is seeking a fiscal year 1994 appropriation of $820,000 to complete preconstruction engineering and design work and to initiate construction on Casino Pier in Chicago. The project was authorized under Section 501(a) of the 1986 Water Resources Development Act (PL 99–662). Reconstruction of the pier is necessary to prevent sedimentation at the mouth of Jackson Harbor, erosion and flooding damage to La Rabida Children's Hospital, erosion of the 63rd Street Beach and subsequent transportation losses due to flooding on South Lake Shore Drive.

The Chicago Park District (caretaker and local sponsor) reports that the outer 300 feet of this 1,800 foot pier is on the verge of structural collapse. This month pictures were taken of additional collapse near shore. Sand sifts from the beach to the harbor entrance both through the pier as well as over it. The Chicago Park District now spends approximately $15,000 a year to remove this sand. For public safety reasons, necessitated by erosion damage and structural collapse, the pier has been closed to the public.

Total project cost is estimated at $7.66 million in 1990 dollars ($3.6 million federal share and $4.06 million non-federal share).

Preconstruction engineering and design work began in fiscal year 1991 with a $220,000 appropriation, and continued with a fiscal year 1992 appropriation of $375,000 and a fiscal year 1993 appropriation of $110,000. Condition surveys and engineering work were conducted and a general design memorandum is being generated. A fiscal year 1993 appropriation of $820,000 is required to complete project plans and specifications, and to begin construction before total collapse causes catastrophic results.

North Branch of the Chicago River dredging to complete feasibility study; appropriation request: $150,000.——The North Branch of the Chicago River dredging project was authorized under the 1946 River and Harbor Act, and extended under Section 52(d)(2) of the 1988 Water Resources Development Act. For fiscal year 1994 the City of Chicago is seeking an appropriations of $150,000 for the Chicago District Corps of Engineers to complete the feasibility study on dredging the North Branch of the Chicago River from North Avenue to Addison Street. The feasibility study is cost shared 50:50 with the local interests, the City of Chicago and the Metropolitan Water Reclamation District of Greater Chicago.

The North Branch of the Chicago River is well situated as a source and destination for shipped materials. It is just a few miles from the Chicago locks entering Lake Michigan and well connected via two routes to the Illinois River/Mississippi River system. The City made a major commitment to industrial retention and development along the North Branch by recently establishing three protected Planned Manufacturing Districts in the area. Critical to that decision was the area's ability to support a vibrant industrial base, primarily because of its immediate access to a number of transportation modes, including the river. Currently, industries along the 3½ mile stretch of the River between Chicago and Fullerton Avenues employ roughly 8,000 workers.

Recognition of the area's economic importance through land-use controls must be accompanied by infrastructure improvements. A number of companies along this stretch use barge transportation, though they are hampered by unnaturally low load limits due to the shallow channel. Increasing the river's capacity as a transportation mode is critical to anchoring the North Branch as an employment center.

In fiscal year 1992 the U.S. Army Corps of Engineers received $100,000 to initiate a reconnaissance study on the dredging of the North Branch of the Chicago River between North Avenue and Addison. The U.S. Army Corps of Engineers in fiscal year 1993 received $100,000 to complete this reconnaissance study. The "Chicago River, North Branch 1946 Modification Commercial Navigation Reconnaissance Report" was completed in November 1992, and found that dredging of the river from North Avenue to Addison Street would be appropriate. The level of commerce located along the river justifies dredging. Site selection for disposal of dredged material will be underway next year, and the City should be involved in selection of site.

$150,000 appropriation for fiscal year 1994 is required to complete the feasibility study on dredging the North Branch of the Chicago River from North Avenue to Addison Street

O'Hare Reservoir to complete construction; appropriation request: $5 million. And McCook and Thornton Reservoirs to initiate construction; appropriation request: $13 million.—The City of Chicago is supporting the Metropolitan Water Reclamation District of Greater Chicago's request for the continued funding towards the construction of critical reservoirs for the Deep Tunnel project: O'Hare ($5 million) to complete construction, McCook and Thornton Reservoirs ($13 million) to initiate construction. These reservoirs are essential to the success of the Deep Tunnel project, the purpose of which is to combat heavy flooding, combined sewer overflow systems, and contaminated storm water in many communities in the region. In addition, the projects would assist the City of Chicago in complying with the Clean Water Act. The Subcommittee has provided funding towards the construction of these reservoirs in recent years, and the City of Chicago respectfully request that such funding continues.

Thank you again for the opportunity to present written testimony on behalf of the City of Chicago's Department of Planning and Development to offer our support for the funding of six critical United States Army Corps of Engineers' projects.

JOINT STATEMENT OF VALERIE B. JARRETT, COMMISSIONER, CHICAGO DEPARTMENT OF PLANNING AND DEVELOPMENT; AND E.P. STEWART, CHAIRMAN, ILLINOIS AND MICHIGAN CANAL NATIONAL HERITAGE CORRIDOR COMMISSION

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to present written testimony on the funding needed for capital improvement projects within the Illinois and Michigan Canal National Heritage Corridor. We are requesting fiscal year 1994 appropriations of approximately $9 million from the U.S. Army Corps of Engineers' Planning and Construction budgets for capital improvements in the Corridor, authorized through the Water Resources Development Act of 1992.

The National Heritage Corridor, which extends 120 miles from Navy Pier and Calumet Harbor in Chicago to LaSalle/Peru, Illinois, was designated by Congress in

1984. The purpose of the Corridor designation is "to retain, enhance, and interpret, for the benefit and inspiration of present and future generations, the cultural, historical, natural, recreational, and economic resources of the corridor, where feasible, consistent with industrial and economic growth."

The Illinois and Michigan Canal National Heritage Corridor was the first of its kind, and has created a model for "partnership parks" throughout the nation. Illinois, the sixth most populous state in the nation, had no national park, and the Corridor was seen as an innovative model for providing recreational resources in populous urban areas. Partners in making the Heritage Corridor a reality include 5 counties, 41 municipalities, numerous park and forest preserve districts, the State of Illinois, and many private organizations and individuals.

The Corridor celebrates the history of Chicago and the Midwest and offers residents thousands of acres of natural and recreational areas. It follows the route of the historic Illinois and Michigan Canal and related waterways that succeeded it as key transportation networks. Outside of Chicago, the.boundaries are approximately ten miles wide, surrounding the historic canal. East of Harlem Avenue, the boundaries follow the South Branch of the Chicago River and the Cal Sag Channel. In the future, 86 miles of trail will extend from Harlem Avenue to LaSalle/Peru Illinois, which can ultimately be linked to the Chicago River Edge Renaissance Trail.

Since the Corridor was designated in 1984, there has been an annual $250,000 federal budget to fund administration and ongoing programs. Significant State and private investment has helped to enhance the Corridor, but federal investment is required to initiate much needed capital improvements. For example, the Illinois and Michigan Canal itself, which is a National Historic Landmark, has been included by the federal government on its list of endangered landmarks because of its deteriorating condition.

The requested fiscal year 1994 appropriations will address the Corridor's capital needs by assisting in funding capital projects throughout the entire Corridor. All of the diverse projects represented in the request are ready to proceed during fiscal year 1994. A 50 percent local match is available for each. The local commitment to these projects demonstrates the viability of the "partnership park" concept, where the federal presence unites the region and stimulates local partners to develop sites that together represent the true equivalent of a national park in Illinois. These projects will help to tie the region together as a spectacular "urban cultural park" serving the nation's third largest metropolitan population as well as residents of the entire region. With local investment and stewardship, these improvements will give residents of Chicago and Northeastern Illinois an unparalleled recreational resource and opportunity to celebrate their history as a building block for the future. Funds would be allocated to projects from Lake Michigan to the western terminus of the Corridor in LaSalle County.

This funding would be a small step in returning more federal dollars to Illinois, which ranked 44th in the nation in fiscal year 1991 in terms of per capita return on federal dollars, and 49th from 1981 to 1988. While the national average is $747 per capita, Illinois receives only $228 in federal dollars per capita.

Fiscal year 1994 appropriations of approximately $9 million from the U.S. Army Corps of Engineers' Planning and Construction budgets are sought to initiate work on identified capital projects. A list of projects for which fiscal year 1994 funds are requested is attached.

ADDENDUM TO TESTIMONY

FISCAL YEAR 1994 APPROPRIATIONS REQUEST FOR CAPITAL IMPROVEMENT PROJECTS IN THE ILLINOIS AND MICHIGAN CANAL NATIONAL HERITAGE CORRIDOR

(Note: Planning and Construction projects are of equal importance, however, projects within each category are listed in priority order)

PLANNING (LISTED IN PRIORITY ORDER)

Chinatown Park, Chicago.—The Chinatown Park will serve Chicago's Chinatown, an area in great need of recreational open space. Chinatown Park will include reconstruction of the river edge, a recreational facility, and much needed park space in a growing residential community once dominated by railyards. The new park will fulfill one of the major objectives of the Illinois and Michigan Canal Heritage Corridor and the Chicago Park District's Land Policies Plan.

Fiscal year 1994 Request: $1.9 million for planning; match: Chicago Park District.

Chicago Riverwalk, Chicago.—The Chicago Riverwalk project is established to promote development of a downtown river edge walkway and park system, extending from Navy Pier to Chinatown. The project provides a comprehensive framework for creating a unified system of walkways, bikeways, and parks. The first phase of the project will focus on a half-mile stretch of City-owned land located on the south bank of the river's Main Branch, from Lake Shore Drive to Michigan Avenue.

Fiscal year 1994 Request: $1.2 million for planning; match: Chicago Riverwalk Corporation (non-for-profit organization).

Chicago (Canal) Origins Park, Chicago.—The new park bridges two Chicago neighborhoods: Bridgeport and Pilsen, both in great need of recreational open space. To feature the site's historic significance, the proposed interpretive park will provide a focal point for the Illinois and Michigan Canal National Heritage Corridor, as well as preserve and research a key archealogical landmark. The park will function as a bird sanctuary and fish habitat, enhancing wetlands and wildlife habitats. To meet the needs of the two neighborhoods, the park will include a boathouse, fitness center, bicycle and pedestrian trail to tie into the proposed riverwalk system.

Fiscal year 1994 Request: $50,000 for planning; match: Chicago Park District.

Channahon Bikepath/Walkway, Channahon.—The Village of Channahon proposes to complete engineering and planning studies to allow for future construction of a network of trails that will provide access to the I&M Canal state trail at several locations.

Fiscal year 1994 Request: $12,000 for planning; match: Village of Channahon and Channahon Park District.

Joliet Heritage Park Archaeological Survey, Joliet.—The Forest Preserve District of Will County proposes to survey the archaeological remains of the steel industry on this 260-acre site to provide the basis for planning for an interpretive park. Unique in the nation, and managed by three different agencies, this park will interpret the industrial history of the region, the canal, natural features including wildlife and prairie remnants, and offer recreational opportunities including hiking, biking and fishing.

Fiscal year 1994 Request: $38,250 for planning; match: Forest Preserve District of Will County.

Grand Village of the Illinois, LaSalle County.—The Illinois Historic Preservation Agency proposes an archaeological survey and testing, river edge shoreline stabilization work, acquisition of adjoining properties and development planning for this National Historic Landmark site. The site, across from Starved Rock State Park, was the site of the first encounter between Europeans and Native Americans in Illinois when explorer Jacques Marquette stopped at this village in 1673. The site also includes a circa 1850s National Register-listed stone inn.

Fiscal year 1994 Request: $454,000 for planning; match: Illinois Historic Preservation Agency.

Pullman State Historic Site, Chicago.—The Clocktower Building and the Hotel Florence, the two most significant structures within Chicago's Pullman Historic District, are being developed into a State Historic Site and museum. The site will tell the story of the region's early industrialization and its role in the development of the nation's transportation system, especially its railroads.

Fiscal year 1994 Request: $1.9 million for planning; match: Illinois Historic Preservation Agency.

CONSTRUCTION (LISTED IN PRIORITY ORDER)

Chicago Portage Site Interpretive Center, Lyons.—The Forest Preserve District of Cook County proposes to construct an interpretive Center at the Chicago Portage National Historic Landmark Site. Visited by most school children in the Chicago metropolitan area, this site will feature the natural history of the Chicago area, the story of Joliet and Marquette's 1673 visit to the site when the canal was originally recommended, and the Native American history associated with the site. Plans and specifications are complete, and construction would be complete during fiscal 1994.

Fiscal year 1994 Request: $1,933,000 for construction; match: Forest Preserve District of Cook County.

Summit Park Path, Summit.—The Village of Summit proposes to enhance the Summit Park Path and adjacent land to promote greater use of the trail by residents and visitors to the area. Funds will be used to add drainage, grass, trees, benches and new equipment for active and passive recreation.

Fiscal year 1994 Request: $97,200 for construction; match: Summit Park District.

I&M Canal Towpath Bike Trail, Lemont.—The Village of Lemont proposes to design and construct a bicycle trail along 2.75 miles of the towpath starting in downtown Lemont. This will be a major recreational amenity along one of the better-preserved sections of the I&M Canal, and will provide a recreational amenity tied to a historic downtown that is being revitalized through the Heritage Corridor Main Street Program.

Fiscal year 1994 Request: $245,750 construction; match: Village of Lemont.

South Public Landing Resurfacing, Lockport.—The City of Lockport proposes to resurface and landscape a public parking lot at the south public landing of the I&M Canal, adjacent to museums, historic structures and the downtown which is being revitalized through the Corridor Main Street Program.

Fiscal year 1994 Request: $100,000 for construction; match: City of Lockport.

Coal Scale House Rehabilitation, Lockport.—The City of Lockport proposes to rehabilitate a small historic building along the I&M Canal as a visitor information center and the offices of the Main Street downtown revitalization program.

Fiscal year 1994 Request: $24,000 for construction; match: City of Lockport.

I&M Canal Fox River Aqueduct, Ottawa.—The Illinois Department of Conservation proposes to rehabilitate the aqueduct carrying the I&M Canal over the Fox River to prevent its collapse. Rehabilitation of this key engineering landmark will include rebuilding the stone piers and stabilizing the steel trough.

Fiscal year 1994 Request: $1,500,000 for construction; match: Illinois Department of Conservation.

FORT PECK RURAL WATER PROJECT

STATEMENT OF CALEB SHIELDS, CHAIRMAN, ASSINIBOINE AND SIOUX TRIBES OF THE FORT PECK RESERVATION

Dear Mr. Gwaltney, I am writing to you to seek your support for the construction of a comprehensive water supply system at the Fort Peck Reservation. The Tribes and the Bureau of Reclamation are preparing a needs assessment of this project. The next stage is to prepare a feasibility study. We are seeking an appropriation to prepare this feasibility study. The cost estimate of this study is $300,000 over the next two years, $200,000 in FY 1994 and $100,000 in FY 1995. This study is the next stage in the plan for providing for the current and future water needs of our people.

The primary source for our water supply is ground water. The water from this source has historically been unacceptable both in quantity and quality. The levels of toxins—manganese, sulfates, iron, nitrates, and selenium—exceed the EPA standard for safe drinking water. EPA has specifically found that some of our towns have contaminated water. The entire municipal distribution system is plagued with recurring bacterial contamination. Simply put, the water is not safe for us to drink.

The only solution to this problem is to find another source of water. Fortunately for the Tribes, another source is readily available, the Missouri River. The Tribes have a reserved water right in the Missouri, set by a compact with the State of Montana approved by the United States. Utilizing a small fraction of that right would meet the present and future water needs of the Reservation.

A comprehensive municipal, rural, industrial water system is the most effective way to meet the needs of the Tribes and our communities. This system would provide quality water not only to Tribal members but to every household and business who could tap into the system. It would include all the municipal, rural and industrial users within our communities.

The system would require a reservation-wide pipe distribution system, using water from either the Fort Peck Reservoir or from the Missouri River downstream from the Fort Peck Dam. This type of system has been successfully used at the WEB and Mni Wiconi projects in South Dakota.

The Tribes and the Bureau of Reclamation are now preparing a needs assessment for the Fort Peck Reservation, the first step towards planning and constructing a municipal, rural and industrial water supply system. A preliminary needs assessment report will be completed by the end of March with the final report completed in August. The next stage of the project is a feasibility study of a municipal, rural, and industrial water supply system at Fort Peck.

This study will take 18 months and cost $300,000 over two years. We are requesting an appropriation of $200,000 for fiscal year 1994 and additional $100,000 for fiscal year 1995 to conduct this study.

The Assiniboine and Sioux Tribes desperately need this system to ensure that our people will have enough quality water to meet our domestic and industrial needs well into the future. Thank you for your time and I look forward to working with you on this project.

RESOLUTION NO. 1064–92–6

Whereas, the Fort Peck Tribal Executive Board is the duly elected body representing the Assiniboine and Sioux Tribes of the Fort Peck Reservation and is empowered to act on behalf of the Tribes. All actions shall be adherent to provisions set forth in the 1960 Constitution and By-Laws, and

Whereas, the Fort Peck Tribes have a reserved water right by virtue of compact entered and agreed to with the State of Montana for the use of Missouri River waters on the Fort Peck Indian Reservation, and

Whereas, the reserved water right held by the Fort Peck Tribes may be applied to meeting the municipal, industrial, and rural water needs within the Fort Peck Indian Reservation, and

Whereas, most areas of the Fort Peck Reservation are presently without a municipal, rural and industrial water supply that is sufficient in both quantity and quality to meet the needs of the Reservation residents now and in the future, and

Whereas, an adequate water supply is basic to the health and well being and the economic self-sufficiency of the residents of the Fort Peck Indian Reservation, Now

Therefore, be it resolved that the Tribal Council of the Fort Peck Tribes authorizes and requests that the U.S. Bureau of Reclamation provide technical assistance in planning for the municipal, industrial and rural water needs of the Fort Peck Indian Reservation.

FEASIBILITY STUDY FOR THE FORT PECK RESERVATION MUNICIPAL, RURAL, AND INDUSTRIAL WATER PROJECT

In June 1992, the Fort Peck Tribal Council requested the Bureau of Reclamation to assist with preparation of a needs assessment for Fort Peck Reservation; the first step towards planning and constructing a municipal, rural, and industrial (MR&I) water supply system. Reclamation is providing assistance to the Tribes under their Technical Assistance to States program.

The current timetable calls for a preliminary needs assessment to be completed in March, a comprehensive needs assessment in August, and preliminary alternatives work completed by September. This appraisal-level work will lay the groundwork for feasibility-level study and NEPA compliance needed for any possible future project authorization. The Tribal Water Resources Office is coordinating the overall effort. Data and other information is being provided by BIA, IHS, the state, SCS, Corps of Engineers, USGS, and EPA.

The basic need is for an adequate and safe water supply for the Fort Peck Tribes that meets all of the Safe Drinking Water Act primary standards and most of the secondary standards. The major problems on the reservation have historically been associated with inadequate supply and unacceptable quality. Groundwater is the primary source of water for most of the residents. This water often exceeds the standards for total dissolved solids, iron, sulfates, nitrates, and in some cases for selenium, manganese, and flourine. Bacterial contamination of municipal water distribution systems has also been a recurring problem.

The Fort Peck Tribes have a reserved water right to Missouri River, a higher quality water source than available groundwater sources. Utilizing a small fraction of that water right would meet present and future reservation needs. Conceptually, the solution to the need for adequate water quantity and quality would be a rural water supply system, using water from either Fort Peck Reservoir or from the Missouri River downstream of Fort Peck Dam. A reservation-wide piped distribution system to supplement or replace existing water sources is envisioned. This sort of system has been successfully used in South Dakota (WEB project) and brings economies of scale to the overall cost of project construction and operations and maintenance. South Dakota's Mni Wiconi project also follows this concept.

The Fort Peck Tribes are interested in working with the Montana Congressional Delegation to seek write-in authority for undertaking a feasibility study of a Reservation-wide MR&I water project. It is estimated that the feasibility study would take 18 months and cost $200,000 in fiscal year 1994 and $100,000 for fiscal year 1995.

STATEMENT OF THE ASSINIBOINE AND SIOUX TRIBES OF THE FORT PECK RESERVATION, MT

The Assiniboine and Sioux Tribes (Tribes) request that funding be provided in the General Investigations Budget of the Bureau of Reclamation (Reclamation) and specific direction be given to Reclamation to cooperate with the Tribes in conducting a feasibility study of the municipal, rural, and industrial water needs of the Fort Peck Reservation (Reservation) in Montana. The funding requested is as follows: $200,000 in fiscal year 1994 and $100,000 in fiscal year 1995.

In October of 1992, the Tribes, with technical assistance from Reclamation and other agencies, began an assessment of the municipal, rural, and industrial (MR&I) water needs of the Reservation, our current homeland. A draft preliminary Needs Assessment Report was completed on March 19, 1993, which points out the deficiencies, both in quantity and quality, of the water supply for both Indian and non-Indian residents on the Reservation in northeastern Montana. A final version of the report will be available on April 15, 1993, and can be provided to this Committee at your request. With continued technical assistance from Reclamation, we plan to have a comprehensive assessment of our water needs completed by September 1993.

Our goal is to ensure that a safe and reliable MR&I water supply will be available throughout the Reservation for residential, commercial, public and industrial purposes, today and into the future. A safe and reliable MR&I water supply is well documented as playing a vital role in promoting and contributing to the Tribes' economic self-sufficiency and for improving and sustaining public health.

We have a serious unemployment crisis on the Reservation. The unemployment rate among the Indian population on the Reservation is nearly eight times higher at 29.7 percent than the non-Indian population unemployment rate of 3.8 percent. The average unemployment rate for the entire state of Montana is 5.8 percent. The industry and commerce sectors that account for the highest employment on the Reservation are services, administrative support, and agriculture. We also have need for technology-related skills and training, particularly relating to water service and treatment facilities.

The major drinking water problems on the Reservation have historically been associated with inadequate supply and unacceptable quality. Groundwater, the primary source for many residents, often exceeds the standards for total dissolved solids, iron, sulfates, nitrates, and in some cases for selenium, manganese, and fluorine. Bacterial contamination of municipal water distribution systems has also been a recurring problem. The Fort Peck Tribes have a reserved water right to the Missouri River, a higher quality water source than available groundwater sources. Utilizing a small fraction of that water right would meet present and future Reservation needs.

The preliminary needs assessment shows that:

The population on the Reservation has been increasing since 1970 while regional population trends of the four county area in and around the Reservation have been steadily declining. During this time period, the non-Indian population has declined by about 27 percent, while the Indian population has increased by 83 percent. Based on the 1990 Census data, the total current population of the Reservation is estimated to be about 10,722 people, with 5,822 Indians and 4,900 non-Indians. The Census data also showed that the Indian population is relatively young, with 79 percent of the total Indian population and 78 percent of the Indian female population under 40 years of age. About 77 percent of those living on the Reservation were born in Montana and 87.8 percent are living in the same county as they were in 1985. The young Indian population, combined with a tendency for a relatively large percentage of the population to remain in the area, supports the continuation of past population trends on the Reservation. The Indian population on the Reservation will likely continue to grow while the non-Indian population may continue to fall slightly. The future (year 2030) MR&I water needs on the Reservation, based on a projection of the population trend just described, were estimated to be about 13,500 people with 11,500 Indians and 2,000 non-Indians.

Livestock production on the Reservation is generally limited by the lack of water supply rather than by the available rangeland capacity, and livestock production could be increased by 20 to 30 percent if adequate water supplies were available. Wheat farming and beef cattle contribute largely to the economic base, as well as feed grains, hay, sheep and hogs, but cattle are the predominate livestock on the Reservation. A majority of the rangeland is located on the northern half of the Reservation, while the southern half of the Reservation near the Missouri River is predominantly cropland. Most livestock operations on the Reservation are cow-calf and the herd sizes are generally small, with 200 to 300 head considered to be a large operation. About 56,000 AUM's (animal-unit-months) are summer grazed over a 5½ to 6-month period beginning in mid-May. A 20 to 30 percent increase would translate into a total of 67,200 to 72,800 AUM's over the grazing period. Increasing the herd size would represent an opportunity to increase household income and stimulate retail trade, particularly in the communities of Poplar and Wolf Point. A Reservation-wide MR&I system could also provide pasture taps for livestock watering which could be expected to boost the local economy. In addition; distributing livestock water to pasture taps at different locations throughout the range has also been found to be an effective measure for soil conservation and range management.

The principle problem that currently exists on the Reservation with regard to MR&I water supply is poor water quality. However, in general the water quality problems do not appear to be an immediate risk to public health. Major population centers are located in the southern part of the Reservation along the Missouri River in and around the communities of Wolf Point, Poplar, Brockton, Fort Kipp, Oswego, and Frazer. Each of these communities, with the exception of Oswego, have public water and sewer systems that provide service to almost 70 percent of the total housing units on the Reservation and an estimated 80 percent of the total population on the Reservation. The water source for each of these public water systems is groundwater from shallow alluvial aquifers. While these systems generally appear to be capable of meeting the MR&I water demands currently being served, the water is not of the best quality; however, typical of most of our groundwater sources. Water analysis data for all of the five public water systems indicates that the water does not violate any maximum contaminant levels for contaminants currently regulated by EPA in accordance with the Safe Drinking Water Act. However, the analyses indicated above average levels for a number of chemical constituents that affect the aesthetic properties of the water, including; sulfate, nitrates, bicarbonate, iron, hardness, and total dissolved solids, and, in some cases, selenium, manganese, fluorine, and sodium. Several systems have also had recent occurrences of biological contamination, most likely within the distribution system. Indian Health Service and the Tribal Health Office have issued public health alerts encouraging users to boil the water before drinking it. Most of the housing units that are not served by one of these public systems are generally rural farms and ranches which rely on individual wells for their water supply and septic tanks or cesspools for sewage disposal. Census data indicates that almost 99 percent of all housing units on the Reservation have complete kitchen and plumbing facilities. The recent occurrences of biological contamination in several public water supplies might be an indication that there may be a problem with operation and maintenance of existing systems. It appears that the existing public water systems are capable of meeting the current MR&I water demands but more than 20 percent of the population are not served by these systems and must rely upon another source, usually groundwater, for there water supplies.

Chemical quality data for groundwater in the Reservation is limited and diverse, both in terms of mineral content (TDS from 300–4,270 mg/L; mean 1,425 mg/L) and of cation composition (SAR from 0.3–194; mean 11.85). Alluvial aquifer groundwater is higher in iron, manganese, and total dissolved solids than recommended by the U.S. Public Health Service for drinking use and is extremely hard. The iron and manganese contributes to the hardness of the water, affects taste and also causes rust colored stains in porcelain plumbing fixtures (sinks and toilets) and discolors laundered clothes. However, it is generally the only current source of domestic water supply to many residents in the area. The sulfate content of this groundwater is often greater than the recommended standard of 500 mg/L, a fact which local residents have adjusted to; however, newcomers to the area may notice a slight "sulfur" taste and experience a mild laxative effect after drinking the water. Nitrate concentrations exceeding the recommended limits in several well water samples suggest contamination from sewage, septic drain effluent, or barnyard wastes and indicates the susceptibility of alluvial aquifers to contamination by surface pollutants. A regional MR&I water supply system using Missouri River water as the supply source is a feasible alternative for addressing the water quality problems that currently exist and would bring safe and reliable water to rural residents not currently served by a public water system. A Reservation-wide MR&I system would also ensure a safe and reliable water supply for future growth and public health on the Reservation.

The total average day water use on the Reservation in the year 2030 is estimated to increase to about 2.6 million gallons per day (MGD) with a peak day water use estimated to be about 5.8 MGD. Based on this estimate, it is clear that additional MR&I water supplies and facilities will be required to meet the future water needs of the Reservation. It is estimated that the average monthly water use in the year 2030 will be almost 81 million gallons per month and the average annual water use will be about 950 million gallons per year. This average annual water use is equivalent to about 2916 acre-feet, which is about 0.28 percent of the Tribes total water right or about 0.31 percent of the Tribes surface water right, as established by the Fort Peck-Montana Compact.

The Missouri River is by far the largest, most dependable, and best quality water resource that is available to the Reservation. The Missouri River flows past the entire southern boundary of the reservation. The Fort Peck Dam is a mainstream dam on the Missouri River located about seven miles upstream from the southwest edge of the Reservation. Fort Peck Dam can impound 15 million acre-feet of water at elevation 2234 msl. Daily discharges from Fort Peck Dam vary considerably to meet power production requirements and range up to 12,000 cubic-feet-per-second. The historical average annual discharge from the dam is about 7.4 million acre-feet per year. The quality of Missouri River water, particularly in Fort Peck Reservoir, is much better than the groundwater previously described and would serve as the best source for MR&I water on the Reservation. On the average, Missouri River water meets all primary and secondary drinking water standards and the chemical constituents affecting the aesthetic characteristics of the water are much better than most groundwater sources found on the Reservation. The Missouri River is being used extensively as an MR&I water source throughout the Dakotas.

A Reservation-wide piped distribution system to supplement or replace existing water sources is envisioned. This sort of system has been successfully used in South Dakota (the WEB project) and brings economies of scale to the overall cost of project construction and operations and maintenance. South Dakota's Mni Wiconi project also follows this concept.

The feasibility study will utilize the needs assessment in laying the groundwork for refinement of alternatives, selection of a recommended plan, and NEPA compliance needed for any possible future project authorization. This will result in a plan for utilizing the compacted water right of the Tribes to satisfy the municipal, rural and industrial needs in our quest to attain economic self-sufficiency and satisfactory quality of life.

GREEN BROOK, NJ, FLOOD CONTROL PROJECT

Statement of the Green Brook Flood Control Commission

Chairman and Members of the Subcommittee, my name is Vernon A. Noble, and I am the Chairman of the Green Brook Flood Control Commission. I present this testimony in support of the Raritan River Basin—Green Brook Sub-Basin project, which we request be budgeted in fiscal year 1994 for $3,500,000 for preconstruction engineering and design funds.

The Commission was established in 1971, pursuant to an Act of the New Jersey Legislature, following disastrous flooding which took place in the Green Brook Basin in the late Summer of 1971. That flood caused $72,000,000 in damages and disrupted the lives of thousands of persons.

In the late Summer of 1973, another very severe storm struck the area, and once again thousands of persons were displaced from their homes. $75,000,000 damage was done and six persons lost their lives.

Thanks to the efforts of New Jersey's Representatives and Senators in Congress, the Corps of Engineers was authorized by Congress in 1986 to design a solution to this problem of flooding. The floods of 1971 and 1973 were only the most recent in a long series of severe floods. Flooding in this Sub-Basin dates back to the late 1800's when they were first recorded, and has become more damaging as the population of the area has grown.

The Green Brook Flood Control Commission is made up of appointed representatives from Middlesex, Somerset and Union Counties in New Jersey, and from the 13 municipalities within the Basin. This represents a combined population of almost one-quarter of a million (248,084) people. The Members of the Commission are all volunteers, and for over 20 years have served, without pay, to advance the cause of flood protection for the Basin. Throughout this time, the Corps of Engineers, New York District, has kept us informed of the progress of the project, and a representative from the Corps has been a regular part of our monthly public meetings.

Thanks to the vigorous support of New Jersey's Congressional Delegation, the Congress in 1986 authorized a comprehensive flood control project for the protection of the entire Green Brook Basin, at a then estimated cost, in 1985 dollars, of $903,000,000.

In 1987, Congress adopted Legislation which included a provision making it clear to the Corps of Engineers that protection is to be designed for the entire Green Brook Basin, rather than only the lower portion of the Basin, as had one time been studied by the Corps of Engineers.

A year ago, we noted with great dismay that the budget submitted to Congress by then President Bush for fiscal year 1993 did not include any funds for the project. We understand that the reason for that posture last year was that the calculated ratio of benefit-to-cost for protection of all of the people and property within the flood area as marginally negative.

We point out that the benefit-to-cost ratio for providing protection for all of the Green Brook Sub-Basin has remained essentially unchanged ever since the project was initially authorized by Congress in 1986.

We note that Congress has solved the problem of insufficient benefit-to-cost ratios in other projects by legislative findings declaring that irrespective of the calculations of the Corps of Engineers, the benefits of certain specific projects were sufficiently important so that they were to be considered as being greater than the calculated costs. In 1990, Congress declared that the benefits of a flood control project in Hazard, Kentucky were to be considered as being greater than the costs; and in 1981 Congress declared that the benefits of a flood control project on the Big Sandy River and the Cumberland River in Kentucky, West Virginia, and Virginia, were to be considered as being greater than the costs of that project.

We believe that it is essential that the Green Brook Flood Control Project be carried forward, and pursued vigorously to achieve protection at the earliest possible date. This project is needed to prevent loss of life and property, as well as the trauma caused every time there is a heavy storm. We urgently request an appropriation for the project in fiscal year 1994 of $3,500,000.

To prevent the possibility that the Administration might reduce or eliminate the appropriation of $3,500,000 for the project, we request that the amount of $3,500,000 be included in the language of the Appropriation Act, so that it cannot be reduced or eliminated unilaterally by the Administration.

Since this project was authorized in 1986, the work allowance to the Corps of Engineers through FY 1993 has amounted to over $13,000,000 ($13,471,000). To abandon this project at this time would be foolish in the light of this large Federal investment. And, abandonment now would be tragic for the thousands who will suffer in the next 100-year flood.

New Jersey has recently strongly reaffirmed its support for the project to provide full protection for all of the people of the Basin. In January of last year, the New Jersey Legislature passed a Bill, which was signed by Governor Florio, establishing a program to plan for the non-Federal share for this and other water resources related projects.

The more quickly the design of this project is completed, the less will be the total cost, and the sooner the project can go to construction.

We are hopeful that Congress will be able to cure the benefit-to-cost ratio for this project as it has for other projects.

Economics and costs are of course important, but personal human tragedy, and the loss of life, is more important.

We urgently request that the Congress provide, in Bill language, an appropriation of $3,500,000 for the Green Brook Flood Control Project in fiscal year 1994.

Thank you, Mr.Chairman, and Members of the Subcommittee, for the opportunity to present this testimony to you.

GREEN BROOK FLOOD CONTROL PROJECT FUNDING

Fiscal year	Administration budget request	Congressional appropriation (nominal)	Savings and slippages	Effective net appropriation to Corps of Engineers	Transfer by Corps to other projects	Net money available for project (work allowance)
1986	$445,000	$445,000	−$19,000	$426,000		$ 426,000
1987	1,370,000	1,370,000		1,370,000		1,370,000
1988	1,400,000	1,400,000		1,400,000		1,400,000
1989	1,500,000	1,500,000	−68,000	1,432,000		1,432,000
1990	1,200,000	1,200,000	−73,000	1,127,000	−$20,000	1,107,000
1991	2,000,000	2,000,000	−496,000	1,504,000	−98,000	1,406,000
1992	2,600,000	3,169,000	−364,000	2,805,000		2,805,000
1993		3,500,000		3,500,000		[1]3,500,000
1994		3,500,000				

[1] Bill language.

LETTER FROM CORPS OF ENGINEERS, PROGRAMS AND PROJECT MANAGEMENT DIVISION, CIVIL PROJECT MANAGEMENT BRANCH

AUGUST 10, 1992.

Mr. JOSEPH A. BISCHOFF, P.E.,
Millcreek Valley Conservancy District,
Cincinnati, OH.

DEAR MR. BISCHOF: Reference the Mill Creek, Ohio, Local Flood Protection Project currently under construction.

Enclosed for your review and comment is a copy of the proposed alternatives for a General Reevaluation Report on the referenced project. These alternatives were developed at the request of the Assistant Secretary of Army for Civil Works, (ASAcw), based on increasing project costs and schedule delays.

The commander of the Ohio River Division, Brigadier General Albert J. Genetti, has indicated he will recommend that the Corps pursue the course of action detailed as Supplement 2 in the report. This option is a plan of study that will lead to a suspension of future construction and a cessation of current project activities.

Please provide your comments to the undersigned no later than August 25, 1992. If you have questions or require further clarification, please call me at (502) 625–7033.

JOHN C. ZIMMERMAN, P.E.,
Project Manager.

SECOND DRAFT, "INITIAL RECOMMENDATIONS OF THE HAMILTON COUNTY ENVIRONMENTAL ACTION COMMISSION FOR MILL CREEK

The HCEAC working group on the Mill Creek met on 7/2 and 8/5,'92 to draft an initial position paper/strategy for addressing the various components and issues associated with Mill Creek. In attendance were Tom Hauser, Robin Corathers, Alan Vicory, Bob Herrick, Jim Kreissl and Stan Hedeen. This draft was develcped after much discussion and will be the main subject at our next meeting.

****

A. Introduction:

The Hamilton County Environmental Action Commission Subcommittee on the Mill Creek (SC) met on July 2 and August 5, 1992. On July 28, the SC was guided on a tour of the Mill Creek (MC) by Mr. Roger Kirby of the Metropolitan Sewer District. As a result of that tour it was obvious to the SC that the MC has been severely damaged by apparent neglect and/or irresponsibility. It is also evident that the MC is and has been considered as a resource to be exclusively used as a vehicle to accept the drainage of storm water, sewer overflow, and other natural or anthropogenic wastes. It was also apparent that there is no "quick fix" for the restoration of and/or preparing for acceptable future uses of the MC. However, whatever choices are made concerning the future use(s) of the MC, the SC recognized that all decisions and recommendations will have to be integrated along the entire stretch of the MC from headwaters to mouth, be multimedia (air, land, water) in nature, and involve the public at large and riparian interests. The SC was somewhat overwhelmed by the complexity of the problems and options associated with the MC but remained very optimistic about the possibility of success. Examples of success involving other severely polluted rivers and streams in localities such as Washington D.C. (Rock Creek and Anacostia), Los Angeles, and San Antonio have been noted that can serve as possible models for the restoration of the MC. By analogy, we should always remember that the restoration of the Cincinnati riverfront was patterned after the experiences in Budapest and have been part of

Cincinnati's long range planning process for many years. We may not live long enough to see the fruits of our labor; but unless we start now, there will be no fruit left for our children.

In concert with our mission, the goal of the HCEAC concerning the Mill Creek (MC) is to make a recommendation(s) as to the "best" use(s) of the MC by the citizens of Hamilton County in the future. This in turn necessitates the development of a clear vision for the entire stretch of the MC and/or any of its segments independently. Establishing a vision for MC is not a simple task. The potential users of the MC have diversified interests and needs thus making the information necessary to evaluate and justify a vision large, complicated and interdependent. The working group identified several potential uses for the MC as listed below. Each one may need a different set of data to properly evaluate its potential.

Potential MC Uses Include: (Other Uses ???)

1. Flood control and its impact on land use in the flood plain.
2. Storm water runoff conveyance.
3. Storm, sanitary and combined sewer discharge.
4. Industrial discharge; eg. under NPDES permit.
5. Other industrial use; eg. cooling or process water.
6. Irrigation
7. Recreational use.
8. Drinking water aquifer replenishment.
9. Aesthetic greenway; riparian landscape restoration.
10. Aquatic / wildlife habitat development.
11. Other ?? To be defined by total HCEAC.

B: Information and Data Needs:

The information and data needed for intelligent decision making concerning the future use of the MC are listed below.

1. Land use and land cover adjacent to or within the MC watershed.

2. Mapping known multimedia pollution sources; hot spots.
3. Detecting and mapping currently unknown point sources.
4. Mapping non point (area sources).
5. Mapping unregulated sources
6. Flood zones for each segment.
7. Flood control options for various MC segments.
8. Population density and proximity to MC.
9. Public access to MC.

10. Property lines and ownership adjacent to MC.
11. Multimedia pollution monitoring (degree and extent) both chemical and biological (C&B):
    a. in MC at various points.
    b. releases from MC to air, ground water, banks and soil, selective escapeways.
    c. to the MC from all sources.
12. Hydrogeological profile, including all human alterations to the channel.
13. Stormwater volume and pollutant concentration (C&B).
14. Combined sewer overflow volume and pollutant concn. (C&B)
15. Planned or existing development controls/patterns at headwaters of MC in Butler county which have (or may have) an effect on the MC.

C: Information and Data Presentation:

The working group recognizes the need to collect or generate data from the above identified topics in such a fashion as to facilitate the decision making process. In order to make intelligent decisions for the entire MC or any of its segments, it will be necessary not only to have the data of interest but to have it properly displayed so that all data may be easily inspected and overlaid simultaneously with all other data. Only in this manner can the interactions of the environmental, human health, economic and social benefits and impacts of the decision making process be understood. Therefore the SC recommends that the use of a GIS be investigated for this purpose.

D: Ongoing MC studies: (May not be complete ??)

In recent months, the HCEAC has learned about several studies that have been completed, initiated, or proposed, including:

1. City of Cincinnati/MSD studies: CH2M Hill, the City's consultant, has proposed a number of studies including: a) relationship of sewer deterioration to industrial discharges; b) industrial waste discharge survey; c) fate and impact analysis to investigate fate of pollutants discharged to MSD collection system and to define their effect in terms of relative risk to human health; d) evaluation of MSD local limits in light of recent and pending environmental regulations and concern about environmental impact of pollutants; e) management and operations audit of MSD; f) setting priorities for capital improvement projects recommended in the SWIM report according to relative ability of projects to mitigate any health risks identified in the fate and impact analysis study; g) MSD policy and goals development; h) review of MSD'S public communication and education program.
2. Corps of Engineers: Study to determine the benefits and costs of completing, partially completing, or not completing the MC channelization project.
3. OEPA: Intensive stream survey to determine the presence and concentration of various MC pollutants.
4. MSD: Combined sewer overflow study and the effect on MC.
5. Cincinnati OEM: Study of MC section 8 including migration of leachate.
6. City of Cincinnati: Environmental assessment of Center Hill landfill leachate problem.

7. Univ. of Cincinnati GIS Center: Butler Co. MC headwaters; study partially completed.
8. Pristine superfund site; Required RIFS studies.
9. Corps of Engineers: Original study on Section 8 of MC.

Although all of these studies have good goals, intentions and will probably generate usable data, each one of them is operating independently and may not be coordinated with each other or with some master plan. Proper coordination and planning of these studies could possibly leverage scarce resources to gain more valuable information at less cost. In addition, since the information gained from any of these studies alone will not enable an intelligent decision making process to take place concerning the future use of the MC, perhaps the preparation of a master information gathering plan should be addressed as soon as possible. Most of the studies listed above have a proprietary sponsor who needs to obtain data for its own specific interest. If the future use of the MC is to be determined intelligently for the citizens of Hamilton County, then a centralized entity is needed to bring the proprietary interest of all these groups together for the maximum benefit of all.

E. Analysis of Data:

Once the information needed to make decisions on the future use of the MC is available and assembled properly, then the various options presented in Section A of this report can be evaluated for either the entire MC or segments thereof. The type of data analysis (including appropriate model projections) which should be performed includes:

1. Human health risk assessment to determine the effect of any option on the health of impacted citizens and whether or not the option is acceptable.
2. Ecosystem risk analysis to determine the effect of any

option on the MC ecosystem and whether or not it is acceptable.

3. Economic analysis of the various options to estimate the actual cost of implementing any option.
4. Future land use projections and the effect of an option on the development of land adjacent to the MC.
5. Cost-benefit analysis of all options which when combined with the analysis in items 1-4 above will enable the final recommendations concerning the final use of the MC.

F. Recommendations:

1. Establish a centralized entity that will be empowered to evaluate and establish policy, prepare long and short term multimedia plans, and be given the resources necessary to coordinate and/or implement a defined course of action itself for the restoration and future use of the MC. The elements of this course of action should include a full descriptive (headwaters to mouth) determination of the best use(s) of each section of the MC and a strategy to garner the political support to have these uses established or protected.
2. The HCEAC be appointed as the oversight Commission to the centralized entity.

NOTE TO HCEAC FROM TRH.

AS YOU REVIEW THIS FIRST ROUGH DRAFT, PLEASE FEEL FREE TO COMMENT OR CHALLENGE ANY ITEM AS YOU SEE FIT. THIS IS OUR DOCUMENT AND NOT MINE; HENCE WHEN WE ARE THROUGH, HOPEFULLY YOU SHOULD BE ABLE TO SUPPORT ITS CONTENT AND WORDING; IF NOT, WE MAY HAVE TO PUBLISH MORE THAN ONE OPINION. ALSO, AS YOU READ THIS, PLEASE GIVE SOME THOUGHT AS TO HOW THE HCEAC CAN BE DIVIDED INTO WORKING GROUPS OR SUBCOMMITTEES TO NOT ONLY PREPARE THE FINAL DOCUMENT BUT GATHER INFORMATION AND GIVE OVERSIGHT IN THE FUTURE.

ARTICLE FROM JANUARY/FEBRUARY 1993 CANOE NEWS "CANOE CLUB ON A SEWER"

Is your river literally a sewer? One that carries industrial, commercial, residential wastes; agricultural, road and parking lot run-off? Really bad? With concrete walls and no trees?

Take heart!

Would you like it to flow clean, for its banks to be forested, a greenway. Canoeable. With fish, ducks, raccoons, herons, kingfishers?

What would it be worth to your Community? What would it cost, how long would it take, who would restore it? Is it the public will that this river remain an open sewer ten years from now? Twenty? Looked at that way does it matter how much it will cost or how long it will take?

It can be done! Los Angeles is working on it. Chicago. Washington, D.C. The Cincinnati area is just starting.

MILL CREEK

The creek has a 166 square mile watershed and its main stem flows 17.4 miles from Interstate 275 in Hamilton County, Ohio, to the Ohio River, through Sharonville, Evendale, Reading, Arlington Heights, Elmwood Place, St. Bernard and Cincinnati.

THE CHANNELIZATION PROJECT

To channelize a stream is to widen, deepen, shorten, straighten or otherwise modify it—any or all of these—to increase stream flow capacity. Purposes are to reduce flood damage and/or speed drainage of farm fields to permit earlier planting or reduce loss of plantings in flooded fields.

Some of the effects of channelization are accelerated stream-bank erosion, downstream flooding, increased siltation, loss of shade leading to instream growth and lower oxygen content, loss of fish and wildlife . . . and maintenance costs forever.

This is the story of a flood control channelization project; planned too long ago and not modified; of how public values and methods have changed since then and how these changes can and should lead to the restoration to a natural stream—from what it is now: an ugly, foul-smelling barren sewage canal lined by dumps, some including toxic waste.

CHANGES—HOW DEVELOPMENT WORKS

As log cabins along rivers gave way to farmhouses, and those to row houses and factories, and those to urban office buildings, and those to high rise offices and condos, the land use showed continuously higher investment per square foot. Urban waterfronts are now intensely developed for open space, beauty, views, greenery, trees, walkways, parks and recreation—to enhance the appeal and value of the high rises, to invite downtown visitation and tourism. Each stage of redevelopment is driven by economics. In the case of Mill Creek, the original economics were concerned with carrying away slaughterhouse waste and other sewage, then, after sewers were built, Mill Creek carried sewage overflow and stormwater from the developed and impermeable roads and rooftops. Later, Mill Creek was seen as invading its floodplain during floods and thus preventing industrial and commercial development on land expected to have great future value.

The channelization project would speed water off the land to the Ohio River during protracted rainstorms, take about 500 acres of land out of the 100-year floodplain for development and protect additional land.

The Army Corps of Engineers project was justified largely on the basis of protecting what wasn't built yet but might be later on.

From its conception in 1962 much has changed. Industrial development has protected itself with levees. Flow obstructions such as narrow bridges are gone. New flood-prone developments have not materialized, partly because of the National Flood Insurance Act which came in about 1977. The Clean Water Act of 1972 et seq. continually ratchets up pollution control in what the creek and its tributary sewers may carry.

Partly for these reasons predicted flood damages have not occurred; also perhaps because of the less sophisticated means 30 years ago of calculating flood levels based on rainfall events. (This project was inspired by a 1959 flood which did about $2 million damage. But the 1979 flood reached levels as high as 1959, yet insured damage claims came to less than $50,000. Which means that the 1959 flood damage causes no longer existed. Less charitable possibilities are that the Army Corps inflated benefits and understated costs in order to get the work, and/or massaged the

100-year flood level calculations, a very simple act. In the 60's and 70's these were common occurrences, driven by congressional politics, development interests and bureaucratic aggrandizement of the Corps.)

Another change was the discovery of numerous toxic waste dumps along the creek, in the path of or proximate to channelization work. cleanup must be addressed; to avoid the dumps would add even more cost.

Yet another change was the discovery of the 7 communities along the creek, including Cincinnati, that no one could answer these questions:

How much benefit would each community enjoy if the project were completed.

How much would it cost to maintain the project after completion. The cost only to cut grass, spray for weeds and remove debris from the channel (but not silt) was set at $800,000 a year. No estimate exists of major maintenance or replacement cost of the concrete walls and other structures. These are large compared to $800,000 as the concrete is subject to freeze-thaw, water, and earth movement, and can dangerously obstruct flow in a flood if it breaks up.

How much would each community (or its flood-protected properties) have to pay for its portion of the completion and ongoing maintenance costs.

Today the channelization cost has risen wildly from $32 million in 1970 to $313 million if completed in A.D. 2000. The local cost-share isn't there and the Corps wants to "walk-away" (their term) from the project, 40 percent completed, $ 110 million spent, some areas flood protected others worse off than before.

(Is there a better way for Congress to spend our $313 million these days?)

Still another change is that some of the communities are much larger and wealthier than in 1962. Values expressed by the public run more to open space, quality of life, trees, bicycle paths, natural areas than to more factories, mini-malls and parking lots. Natural areas add value to homes, in some cases they return more in tax revenue than they require in municipal services, putting them in the class of industrial and commercial development.

The more-aware community administrations understand that tax base can be increased by quality redevelopment without concomitant growth.

A FAILED PROJECT, A BOONDOGGLE

As in many projects, the seeds of failure here lay in the planning. This was essentially a single purpose work, flood control only, not multi-objective. The benefit/cost analysis was jiggered to make it look legitimate. Deficient engineering, inadequate local guarantees, failure to make changes as time went on, failure to involve the people who would have to pay, failure to take into account the many laws and regulations that came in between 1970 when the work was authorized by Congress and today.

RIVER RESCUE

Quoting from a draft vision statement of the Hamilton County Environmental Action Commission, "Imagine the creek as it once was, and as it could be again. Before its destruction . . . (it) probably resembled certain reaches of the Little Miami River. Indeed, the creek once possessed all of the features that would today qualify it as a National Wild and Scenic River.

In the early years of the century there was still a canoe club on Mill Creek. . . If its waters were pure and its banks forested . . . (it) could be a 17-mile greenway a park that would link our communities, our east and west, extending downtown to the Ohio River. It could offer fishing . . . and other forms of recreation. It would in many spots be a refuge of quiet beauty in the urban environment, not unlike Rock Creek Park in Washington, D.C. or the C&O Canal. It would cease to depress land values and foul well water in the communities through which it flows. It would buffer and mitigate the transportation corridor's noise and exhaust gas . . . and enhance the quality of life in Hamilton County.

The opportunity that lies before us in nothing less than a chance to redesign a river, make the Mill Creek suit our highest land-use purposes for the near and distant future. . . ."

A CANOE CLUB AGAIN, 100 YEARS LATER?

It's up to us! It can be done!

Footnote: Rivers Unlimited challenged the benefit/cost analysis of the flood control project in 1974; reinvestigated it with extensive research in 1991–92 and alerted the communities that large unknown costs and problems loomed ahead, with questionable benefits to them. In April 1992, Rivers Unlimited recommended to Cincinnati and the other Mill Creek communities that they consider restoration of the creek for multiple purposes, including resolution of remaining flood questions.

We expect this restoration to go forward.

LETTER FROM THE U.S. ARMY CORPS OF ENGINEERS, DIRECTORATE OF PROGRAMS AND PROJECT MANAGEMENT

SEPTEMBER 14, 1992.

Hon. CHARLES J. LUKEN,
Longworth House Office Building,
Washington, DC.

DEAR CONGRESSMAN LUKEN: I write this letter to inform you that I have recommended to the Director of Civil Works, Headquarters U.S. Army Corps of Engineers, that the Corps prepare a study which will examine an indefinite suspension or project termination of all future work activities on the Mill Creek Flood Control Project located in Hamilton County, Ohio. I have made this recommendation because I have not been provided by the Millcreek Valley Conservancy District, the project's sponsor, with a credible financing plan for the remaining non-Federal costs on the project nor a workable plan of action for the remediation of Hazardous, Toxic, and Radioactive Waste (HTRW) contamination discovered two years ago in section 8 of the project.

The study I am recommending would define for the uncompleted project the flood hazard of a 100 year flood event to insure that the community understands the magnitude of the flooding problem remaining. A frequency profile for the 100 year flood event will also be developed which reflects a "worst case" condition by assuming no future project maintenance is performed on the completed sections by the local sponsor. The objectives are to define the environmental and flooding impacts of the uncompleted project, and to determine what, if any, actions are required by the Federal Government for indefinite suspension or termination of all design and construction activities including for continued maintenance of previously completed work.

Considering the excessive cost and time growth which has been experienced on the Mill Creek project, further Federal investment, without a solid financial commitment by the project sponsor to complete the project within a realistic time frame, is not warranted. However, I do feel that the Conservancy District should have the opportunity, during the period of study to determine how best to close the project down in an efficient and environmentally sound manner, to demonstrate both its desire and financial capability to complete the project.

Should you or your staff have any questions or need additional information on my decision to recommend a study to indefinitely suspend or terminate work on the Mill Creek project, please do not hesitate to contact me at telephone (513) 684–3002.

Sincerely,

BRIG. GEN. ALBERT J. GENETTI, JR.,
U.S. Army Division Engineer.

LETTER FROM CONGRESSMAN BILL GRADISON AND CHARLES J. LUKEN

October 1, 1992

The Honorable Richard B. Cheney
Secretary
U.S. Department of Defense
Room 3E880
The Pentagon
Washington, DC 20301-1155

Dear Mr. Secretary:

We are writing concerning an impending decision by the U.S. Army Corps of Engineers with regard to the Mill Creek Local Flood Protection Project. This project was authorized by the Flood Control Act of 1970 and construction began in 1981. The purpose of the project is to protect an area of about 165 square miles in the Cincinnati metropolitan area against the risk of flood arising out of the Mill Creek.

It is our understanding that Brigadier General Albert Genetti, Commanding Officer, Ohio River Division, has recommended that the project be terminated and that a study be conducted on the potential consequences of the closure of the project.

Our concern is not about the disposition of the project per se. Our immediate concern is the method by which the Corps proposes to make its final determination. We believe the type of study proposed by the Corps of Engineers (i.e., the abbreviated "walkaway" study) is inadequate. In our judgement, the lack of a thorough study will guarantee that the Corps will make its decision based on faulty and incomplete data.

We urge you to ensure that the Corps not be permitted to do the minimum required to abandon the project. The Corps should complete a general reevaluation report on the project, including a thorough consideration of the economics of the project, the potential environmental impact, and a complete remapping by the Federal Emergency Management Agency of the affected flood plain.

In this manner, the Corps will be able to make a thoroughly informed decision. Equally important, only the completion of a comprehensive study will give local communities confidence in the Corps' decisions.

Sincerely,

Charles J. Luken
Representative in Congress

Bill Gradison
Representative in Congress

OPPOSITION--MILL CREEK, OH, FLOOD CONTROL PROJECT

STATEMENT OF GWEN MARSHALL, CINCINNATI, OH

August 10, 1992 letter from U.S. Army Corps of Engineers to Joseph Bischoff, Mill Creek Valley Conservancy District "The commander of the Ohio River Division, Brigadier General Albert J. Genetti, has indicated he will recommend that the Corps pursue the course of action ... that will lead to a suspension of future construction and a cessation of current project activities."

2nd Draft, August 6, 1992 "Initial Recommendations of the Hamilton County Environmental Action Commission for the Mill Creek. The final draft is now being prepared but their basic recommendation is to "establish a centralized entity that will be empowered to evaluate and establish policy, prepare long and short term multimedia plans, and be given the resources necessary to coordinate and/or implement a defined course of action itself for the restoration and future use of the Mill Creek."

January/February, 1993 Canoe News, an article titled "Canoe Club on a Sewer" by Mike Fremont from Cincinnati, Ohio. The pictures on the front cover show pictures of channelized portions of the Mill Creek in contrast to natural areas of the creek. The natural areas were upstream of the Seymour Bridge in Carthage and the channelized areas were downstream of the same bridge. The page and a half long article discusses the Mill Creek Flood Control project as a project that failed to demonstrate that its benefits exceed the costs. The article stated that "in the early years of the century there was still a canoe club on Mill Creek." The prejected restoration being proposed by the Hamilton County Environmental Action Commission is described in the article as "the opportunity that lies before us is nothing less than a chance to redesign a river, make the Mill Creek suit our highest land-use purposes for the near and distant future..."

September 14, 1992 Letter to Congressman Luken from Albert Genetti, Brigadier General, U.S. Army Corps of Engineers advising him of the reasons he recommended termination or suspension of the flood control project. The main reason listed was that the local sponsor could not guarantee funding. The residents and businesses of Cincinnati and cities to the north have indicated their lack of interest in paying for maintenance of this project.

October 1, 1992 Letter from Congressman Luken & Congressman Gradison requesting that the area impacted by the flood control project be left in the best possible condition.

MILL CREEK FLOOD CONTROL PROJECT BUDGET REQUEST FOR FY'93

Reevaluation Report	350,000
Phase II HTRW Assessment	100,000
Preliminary O & M Evaluation	25,000
Project Administration	600,000
Initiate Section 4B	2,546,000
Complete Section 1 Construction	1,079,000
Construction Management	400,000
Total	5,100,000

Both the House & Senate passed the request for FY'93
for $4.3 million
A few days later the Army Corp announced to people in Cincinnati that the project would likely be terminated. I notified the Chairmen of both the House and Senate Energy and Water Development Appropriations Subcommittees that if the project was being terminated that it was unnecessary to fund initiation of a new section.
I am very pleased to see that the Conference Committee reduced the funding for this project for FY'93 to $2.5 million.
(A copy of my letter and newspaper article are enclosed as reference material.)

It would be inappropriate for the City of Cincinnati and Hamilton County, Ohio to be left in worse shape, flood control wise, than they would have been if this project were never begun.

RECOMMENDATION:

The Army Corp should be directed to work with the affected parties and their representatives, not the Mill Creek Conservancy District, to determine how to best restore the Mill Creek. The money in the FY'93 budget should be spent towards this end and not for other purposes. If money is requested for FY'94 for this project it should be especially monitored to make sure it goes to the purpose requested and not to just the administrative overhead of the Army Corp Regional Office.

CONCLUSION:

Awareness of this project has grown in the Greater Cincinnati area so citizen and press monitoring has greatly improved since this project's beginning. Congress should also be made aware that if money is requested for the "Metropolitan Region of Cincinnati, DUCK CREEK, Ohio, Kentucky Project" that this project tewill be opposed by the same people opposing the Mill Creek project because a case can be made that this project is an even worse waste of taxpayer dollars than the Mill Creek Project.

THANK YOU:

I very much appreciate the help and consideration you have given me while I have worked with your committee on this project. I especially appreciate being given the opportunity to testify on this matter since we don't even know if it is in the budget or not. Thank you for extending your day for me for the hearing, I could not have been able to make a second trip to Washington, D.C. next week. I do appreciate the way you have gone out of your way to work with an ordinary citizen such as myself on a matter of this sort.

DEPARTMENT OF ENERGY RESEARCH AND DEVELOPMENT PROJECTS

OMEGA LASER UPGRADE

STATEMENT OF ROBERT L. MCCRORY, PROFESSOR AND DIRECTOR, LABORATORY FOR LASER ENERGETICS, UNIVERSITY OF ROCHESTER

SUMMARY AND REQUESTED ACTION

The U.S. Inertial Confinement Fusion (ICF) program is focused to demonstrate the ignition of small masses of thermonuclear fuel in the laboratory by using lasers or particle beams. The National ICF program is an investment in a dual-use technology with the threefold mission: "(1) to play an essential role in accessing physics regimes of interest in nuclear weapon design and to provide nuclear weapon related physics data, particularly in the area of secondary design; (2) to provide an above-ground simulation capability for nuclear weapon effects on strategic, tactical, and space assets (including sensors and command and control); and (3) to develop inertial fusion energy for civilian power production."[1] The most significant long-term potential commercial application of ICF is the generation of electric power. The National Energy Policy Act (Sec. 2114. Fusion Energy)[2] directs the Secretary of Energy to conduct a fusion energy program to demonstrate the practicability of commercial electric power production by 2010, including research and development for Inertial Confinement Fusion Energy. President Clinton's A Vision for Change in America[3] reaffirms the importance of fusion: "Fusion offers the promise of abundant energy from readily available fuels with low environmental impact." Vice President Gore's book, Earth in the Balance[4] advocates vigorously continuing research and development of fusion to provide a source of abundant, safe electricity for the future.

In its dual-use mission, ICF helps meet the Nation's challenge to reduce defense costs responsibly while increasing the Nation's competitive posture for a secure, environmentally sound, energy future. ICF research is more important as the Nation significantly decreases the number of nuclear weapons and underground nuclear weapons tests, and downsizes and consolidates nuclear weapons research and development activities.

The University of Rochester's Laboratory for Laser Energetics (LLE), involved in ICF since the late 1960s, is the only ICF program that has been jointly supported by the Federal government, State government, industry, utilities, and a university. LLE makes contributions to the National ICF program, at relatively small comparative cost to the government, and transfers technology to the public and private sectors through the training of graduate students and interaction with industry and other federal laboratories. The facility serves as a National laser users facility benefiting scientists throughout the country. LLE is a unique and key contributor to the National ICF program with the prime mission to validate the direct-drive option for ICF. LLE and Lawrence Livermore National Laboratory (LLNL) closely collaborate to support the expeditious demonstration of ignition and gain in the laboratory, the objective set by the National Academy of Sciences' (NAS) review of the National program in 1990.[5]

The OMEGA Upgrade, a major project within the Department of Energy (DOE), is in the third year of a four and one-half year construction period. The OMEGA Upgrade will be the only facility that can demonstrate the scientific potential of direct drive to provide a modest-to-high-gain option for the Nation. The Upgrade has received $51,200,000 of the $61,000,000 total estimated cost (TEC) approved by DOE. It is on time and within the cost schedule. To maintain the schedule for the OMEGA Upgrade and provide the program deliverables and results specified in the NAS report, as well as maintain the educational programs at Rochester, a total authorization and appropriation of $25,198,180 ($16,498,180 for operations, $700,000 for capital equipment and $8,000,000 for capital to fund the OMEGA Upgrade) is requested for the University of Rochester for fiscal year 1994.

ICF PROGRAM STRATEGY

The demonstration of ignition and gain from a thermonuclear target in the laboratory is the next logical step for both defense and energy development of fusion. The primary objective of the National ICF program in the next five years is to complete the science and technology base to provide a demonstration of ignition and gain by, approximately, the year 2000.[6] The strategy is to develop x-ray-driven data from the NOVA facility at LLNL, and to obtain data from directly driven implosion experiments on the OMEGA Upgrade laser at the University of Rochester. Based on the recommendation of the recently-formed Inertial Confinement Fusion Advisory Committee,[6] the DOE recently approved KD–0 studies (mission need/conceptual design) for a major facility, the National Ignition Facility (NIF) to demonstrate ignition and propagating burn in thermonuclear fuel in the laboratory. If direct-drive results are favorable, a modification of the NIF to include a dual capability (direct and indirect drive) to demonstrate high gain is envisioned. The National program strategy as discussed in DOE's Inertial Confinement Fusion Five-Year Program Plan (FY1992–FY1996)[7] is illustrated in Fig. 1 below.

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[1] Footnotes at end of article.

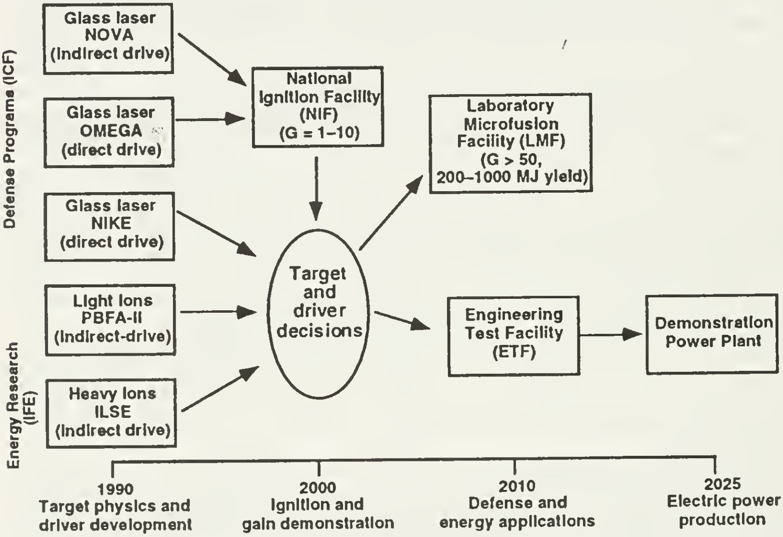

Defense Programs (ICF)
Glass laser NOVA (Indirect drive)
Glass laser OMEGA (direct drive)
Glass laser NIKE (direct drive)
Energy Research (IFE)
Light Ions PBFA-II (Indirect-drive)
Heavy Ions ILSE (Indirect drive)
National Ignition Facility (NIF) (G = 1–10)
Target and driver decisions
Laboratory Microfusion Facility (LMF) (G > 50, 200–1000 MJ yield)
Engineering Test Facility (ETF)
Demonstration Power Plant
1990 Target physics and driver development
2000 Ignition and gain demonstration
2010 Defense and energy applications
2025 Electric power production

FIGURE 1.—The glass laser program plays a central role in the National ICF program strategy. In addition to providing significant near-term weapon physics for high-energy-density experimental capabilities, the glass laser program and the NIF will be used to define driver, target, and technology requirements for future applications.

The 1990 NAS review of the National ICF program recommended that "The expeditious demonstration of ignition and gain should be the highest priority of the inertial confinement fusion (ICF) program. Adequate funding toward this goal must be assured."[5] In the next few years it will be possible to demonstrate thermonuclear ignition and gain in the laboratory through a few crucial, well-defined experiments. In order to implement the principal recommendation of the NAS review, the Committee advised DOE to (1) conduct experiments using precision NOVA at LLNL, (2) validate the laser architecture for an advanced glass laser for an ignition demonstration, and (3) construct the OMEGA upgrade at the University of Rochester's Laboratory for Laser Energetics (LLE). The NAS report stated that other recommendations in the report were of lower priority than the ignition demonstration, and that the principal recommendation should be carried out at the expense of lower-priority program components if sufficient funding were not available.

LLE ROLE IN THE NATIONAL PROGRAM

The goal of the direct-drive program is to validate high-performance direct-drive capsules. The decision on a direct-drive capability for the NIF will be based on the results obtained from the OMEGA Upgrade. The experiments that form the basis for this decision will be performed on the OMEGA Upgrade through 1999. Design and construction of the Upgrade began in fiscal year 1991. An extensive collaborative program between LLNL and LLE is continuing to provide data on basic physics, beam smoothing, and unstable hydrodynamics in planar direct-drive geometries. Figure 2 illustrates the target physics and driver technology issues being addressed as part of the National program plan for inertial fusion.

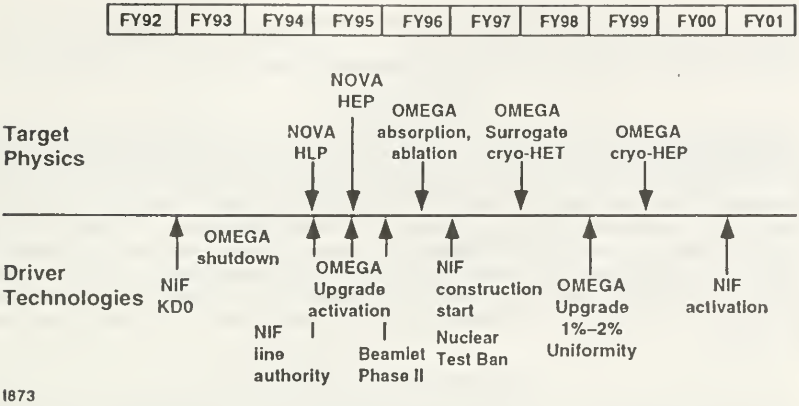


FIGURE 2.—National program plan for glass lasers. The OMEGA Upgrade and NOVA programs are complementary. HLP denotes hohlraum laser physics experiments; HEP represents hydrodynamic-equivalent physics experiments; HET represents hydrodynamic-equivalent target experiments.

The direct-drive approach to ICF can potentially provide high gain at a smaller drive energy than the indirect-drive approach. To realize this potential, it is necessary to produce extremely uniform laser irradiation of capsules to control hydrodynamic instabilities that degrade performance. The current emphasis in the National program is to develop techniques to achieve symmetric, uniform illumination on the OMEGA Upgrade. The present LLE experimental and theoretical program includes:

(*a*) Exploring and developing improved SSD as needed. (SSD is a beam-smoothing technique developed at Rochester that permits very uniform illumination of directly driven targets.)

(*b*) Intensifying efforts to improve capsule fabrication capability, with special emphasis on using advances from the international ICF community.

(*c*) Constructing the upgraded version of the OMEGA laser with a flexible configuration in anticipation of experiments that speak to varied and sometimes unexpected capsule physics issues. The OMEGA and NIF have some technological aspects in common, so that rapid completion of the former is beneficial to the latter.

(*d*) Conducting a vigorous and substantial diagnostics development and engineering effort to provide a state-of-the-art experimental measurement capability to use on the OMEGA Upgrade.

(*e*) Use of the recently completed prototype beam line developed for the OMEGA Upgrade to generate and study plasmas similar to those expected to be important for direct-drive high-gain capsules.

The objectives for LLE are consistent with the NAS recommendations, and are embodied in the OMEGA Technical Contract in the DOE five-year program plan.7

Education and training of students are an essential part of LLE's mission. Our students include graduate students performing Ph.D. and Masters' research, undergraduate students working part-time during the school year and in cooperative education programs, and high school students participating in the summer research program. The educational program is supported by the strong participation of University faculty. Twenty-six members of the University of Rochester have secondary appointments as scientists or engineers at LLE. The faculty members and students come from many of the departments and colleges within the University, including Mechanical Engineering, The Institute of Optics, Physics and Astronomy, Electrical Engineering, Chemistry, and Chemical Engineering.

The graduate program provides education and training in the field of ICF and related areas. Currently, 60 students are pursuing graduate research at LLE. LLE employs 67 undergraduate students, including cooperative education program students. Most of these students provide technical support in areas related to their undergraduate major for the scientific and engineering research projects at LLE.

Ten students who completed their junior year in high school participated in the 1992 Summer Research Program at LLE. This is the fourth year that the Laboratory has conducted such a program. This activity, eight weeks in duration receives partial support from the National Science Foundation. The program exposes students to state-of-the-art research in science and technology, and we hope that the experience motivates the students to pursue a technical career.

OMEGA UPGRADE

Congress authorized and appropriated funds for LLE (including $22,140,000 for the OMEGA Upgrade construction) as shown in the table below for fiscal year 1993. The Congressional action resulted in a cost effective OMEGA Upgrade schedule (four and one-half years as approved by DOE) and maintained continuity of the LLE program. In September 1992, Key Decision III, construction start, was approved by DOE. During fiscal year 1993, OMEGA was temporarily shut down and construction begun for the Upgrade. All planned DOE reportable milestones to date have been achieved on schedule, and the project is on budget. As of this writing, the project has met all DOE reportable milestones, and is operating within the approved baseline budget.

FUNDING AND MANAGEMENT

The table below shows the funding requirements for the period fiscal year 1993-fiscal year 1997 for the upgrade of the OMEGA laser and operations of the enhanced facility, based on the four and one-half year construction schedule and $61,000,000 total estimated cost (TEC) approved by DOE for the OMEGA upgrade.

The operations and capital equipment budgets shown in the table are taken from the five year Cooperative Agreement (DE-FC03-92SF19460) between the University of Rochester and DOE. Both the operations and capital budgets were audited (by DCAA and DOE) and approved in accordance with DOE standard procurement procedures. The scientific objectives, strategy, and statement of work were subjected to merit review conducted by DOE and approved in final form by the Office of rnertial Fusion in Defense Programs in DOE.

	Fiscal year—				
	1993	1994	1995	1996	1997
Operations	$15,590,000	$16,498,180	$17,165,770	$18,191,770	$19,150,770
Capital	23,410,000	8,700,000	3,600,000	1,900,000	2,000,000
Total	39,000,000	25,198,180	20,765,770	20,091,770	21,150,770

Note.—The capital entry for fiscal year 1994 includes $700,000 to support operations. The capital in fiscal year 1995 is the capital balance ($1,800,000) to complete the OMEGA Upgrade and operating capital, for fiscal year 1996 and beyond, the capital entry is the equipment budget required to support operations of the OMEGA Upgrade.

To maintain the schedule for the OMEGA Upgrade and provide the program deliverables and results specified in the NAS report and in the Cooperative Agreement with DOE, as well as maintain the educational programs at Rochester, a total authorization and appropriation of $25,198,180 ($16,498,180 for operations, $700,000 for operating capital equipment and $8,000,000 for capital to fund the OMEGA Upgrade) is requested for the University of Rochester for fiscal year 1994.

REFERENCES

[1] Justification of Mission Need for the National Ignition Facility, DOE Memorandum, approved by the Secretary of Energy, January 15,1993.

[2] PL102-486 The National Energy Policy Act of 1992 (see House of Representatives Report on HR776, House Report #102-1018).

[3] A Vision of Change for America (U.S. Government Printing Office, Washington, DC, February 17,1993).

[4] Vice President Al Gore, Earth in the Balance (A Plume book, Houghton Mifflin, NY, 1993).

[5] Review of the Department of Energy's Inertial Confinement Fusion Program Final Report (National Academy Press, Washington DC, 1990).

[6] V. Narayanamurti, letter to the Hon. Richard A. Claytor on behalf of the Inertial Fusion Advisory Committee (December 30, 1992).

[7] Inertial Confinement Fusion Five-Year Program Plan, U.S. Department of Energy, Office of Inertial Fusion, December 31,1991, Rev. September 1992. Solar and Renewable Energy Programs

SOLAR AND RENEWABLE ENERGY PROGRAMS

Statement of Carol Werner, Director, Energy and Climate Program, Environmental and Energy Study Institute

Mr. Chairman and Members of the Subcommittee, I am pleased to submit testimony regarding recommended funding levels for the Department of Energy's renewable energy programs for fiscal year 1994 on behalf of the Energy and Climate Program of the Environmental and Energy Study Institute (EESI), a Washington, D.C. based, non-profit, public policy organization formed by environmental leaders of Congress in 1984.

We applaud the Clinton administration for recognizing that energy efficiency, renewables and natural gas should play a more central role in U.S. energy policy and we are pleased that the administration has submitted a budget that asks for funding increases in each of these three areas. We urge you and the subcommittee to fully fund the $327.2 million request for the solar and renewable energy program.

We note that the administration request included $11 million for renewable energy demonstration and commercial application projects. We regard commercialization and joint venture activities as being critical to the active deployment of renewable energy technologies. We strongly support the administration's request for demonstration and commercial application projects.

I would like to bring to your attention the policy and budget recommendations contained in "The Sustainable Energy Blueprint" and "A Sustainable Energy Budget." These recommendations were assembled late last year to provide the new administration and the new Congress with an outline of a comprehensive, yet achievable, path to a sustainable energy future for this country—a future that would protect the environment, reduce greenhouse gas emissions, preserve public health, enhance national security, strengthen the economy and U.S. competitiveness, and create jobs. A broad-based coalition of 110 organizations—environmental, energy policy, consumer, public health, community groups and governmental entities—was involved in this process. Copies of the Sustainable Energy Blueprint and the Sustainable Energy Budget have been distributed to the offices of each Member of Congress. While EESI strongly supports the administration request for the renewable energy programs, we would like to use this opportunity to bring to your attention the scope of the request put forward in the Sustainable Energy Budget.

To help the United States achieve its energy policy goals, the Sustainable Energy Budget recommended reorienting DOE's budget priorities and redirecting $1 billion from energy sources such as nuclear fission and fusion to energy efficiency, renewables and end-use natural gas programs.

Last year, Congress passed the Energy Policy Act of 1992 (EPACT), P.L. 102–486, which authorized numerous rulemakings, programs and policies affecting programs under your jurisdiction. We understand that Acting Assistant Secretary for Conservation and Renewables, Robert San Martin, has testified that there are over 400 directives in EPACT that directly affect the programs under his purview; Mr. San Martin estimates that to fully fund all of the renewable energy and energy efficiency provisions of EPACT would require over $2 billion in new appropriations.

The recommendations made by the Sustainable Energy Budget fall far short of full funding for EPACT implementation. As mentioned above, our funding recommendations are based upon a significant redirection of priorities and resources within the DOE budget. We believe energy efficiency, renewables and end-use natural gas programs should receive increased funding, but we also recognize that there are limited federal resources. Further, we strongly believe that such a shift is an imperative for putting the country onto a sound, sustainable energy path. The recommendations of the Sustainable Energy Budget reflect our perception of needs as well as our understanding of what projects can be undertaken with money well spent.

The Sustainable Energy Budget recommended funding DOE's renewable energy programs at $581 million for fiscal year 1994, a major increase from fiscal year 1993's $202.8 million. This request aggregates funding recommendations for the wind, solar, biomass and geothermal R&D programs. It recommends $261 million for R&D; $120 million for Joint Ventures for Emerging Technologies; and $200 million for Commercialization Projects.

WIND R&D

DOE's core wind research program should continue to focus on refining and improving the design of wind technology components, including turbines, controls and power electronics, and rotors.

Funding for DOE's Pacific Northwest Laboratory wind resource assessment program also should be a priority for this Subcommittee. As average wind speeds can vary tremendously even in a small geographical area, an accurate wind resource assessment is inextricably linked to optimizing America's wind resource. The Midwest and Great Plains have enormous wind energy potential; accurately mapping this resource should be a priority of DOE's wind resource assessment program.

The development of the variable speed wind turbine and other technological developments of the 1980s drove down the costs of wind energy and greatly improved the reliability and capacity factors of wind energy systems, making wind power generation cost-competitive with new conventionally fired power plants. Utilities in some regions of the country are planning and constructing wind farms. But many utilities for which wind energy would be a cost-effective resource are not developing this power source. Resources should be provided for research projects which identify and mitigate non-economic barriers to utility adoption of wind power.

SOLAR R&D

The Sustainable Energy Budget recommends that federal support for the photovoltaic (PV), solar thermal and solar buildings R&D programs be increased.

While PVs have already been shown to be cost-competitive for a variety of stand-alone applications in the U.S.—such as in irrigation and street lights—advances in materials research can vastly expand the PV market. Federal support for materials R&D for PVs should focus on increasing PV efficiency, improving crystal growth and thin film deposition techniques, and developing advanced film materials.

Solar thermal systems use concentrated sunlight to generate heat which is either converted to electricity or used for industrial processes. Three types of solar thermal technologies—parabolic trough systems, central-receiver plants, and parabolic dish systems—are either currently in use or under development. Research and development of long-life, low-cost solar reflector (optical) materials should be a priority of DOE's solar thermal program. Funds should also be appropriated for testing and evaluating heliostats for central receiver applications and concentrators for dish-engine systems and for the development of solar-fossil hybrid and advanced receivers. Very promising industrial solar thermal technologies—such as solar detoxification and solar process heat—could be commercialized with additional R&D support to improve system efficiencies and thereby bring down costs.

Solar water heating R&D efforts should include funding for advanced glazings and coatings. The payoff from this research could be increased absorption and retention of solar energy in solar hot water systems. DOE's interlaboratory white paper, "The Potential of Renewable Energy," estimated that there are more than a million solar water heating systems installed in the United States. Improving the efficiency of these systems through materials research and better controls could markedly increase the market for solar water heaters.

BIOMASS

The Sustainable Energy Budget recommends funding projects to optimize engines for biofuels (ethanol and biodiesel) to improve fuel economy. With additional funding support, engines optimized for biofuels can be ready for commercial production in fiscal year 1995.

The conversion of biomass to biofuels represents a renewable energy based pathway to transportation fuels production. Over 850 million gallons of ethanol are produced annually in the United States, primarily by the fermentation of corn. Although ethanol from corn dominates the biofuels industry today, the largest potential for ethanol from biomass exists in the use of cellulosic biomass—woody and herbaceous plants. The development of techniques to increase the ethanol yield and decrease the cost of cellulosic biomass via biochemical processes should be a priority research objective of DOE's biofuels program. The work underway at the National Renewable Energy Laboratory and at Oak Ridge National Laboratory should be ramped up to meet the research needs of the biofuels market. According to The Potential of Renewable Energy, a sustained research effort could drive down the cost of wood-derived ethanol to $.60 per gallon, a cost that would be economically competitive with gasoline. Research efforts to drive down the costs of biodiesel should also be supported.

GEOTHERMAL

Geothermal energy systems make use of the natural heat of the earth to produce electricity. 2800 megawatts of electricity are generated in the United States from geothermal resources. The U.S. Geological Survey (USGS) estimates that the total geothermal resource usable for power generation in the Western United States, Alaska and Hawaii—if developed—could provide 95,000 to 150,000 mega-watts of electricity for 30 years.

The Sustainable Energy Budget recommends supporting various geothermal research efforts, including developing new and improved exploration techniques and drilling technologies, improving the means of predicting reservoir production rates and longevity, and developing new materials to help cope with the tendency of geothermal fluids to cause scaling and corrosion of equipment. Research also should be focussed on developing more efficient turbines and energy conversion equipment.

DEMONSTRATION AND COMMERCIAL APPLICATION PROJECTS—JOINT VENTURES

Section 1202 of the Energy Policy Act of 1992 (EPACT) authorized DOE to create a cost-shared program for the commercialization of renewable energy technologies through joint ventures. Eligible projects range from direct combustion or gasification of biomass to solar thermal, photovoltaics, wind, geothermal and fuel cells.

The Sustainable Energy Budget urges Congress to fully fund the Section 1202 renewable technology commercialization program. Utilities—the major consumer of renewable energy technologies—are loathe to make major financial commitments to new technologies with unknown maintenance and operating records. Cost-shared projects—joint ventures—are imperative for the commercialization of the nation's renewable energy resources.

Some of the specific cost-shared projects we support include the Advanced Wind Turbine program, which is designed to support the design of innovative wind turbines that differ substantially from current turbine design, and the Photovoltaic Manufacturing Technology initiative, which is designed to overcome obstacles to scaled-up advanced manufacturing and bring down per unit PV costs. We also would like to see industry cost-sharing with DOE projects to commercialize biofuels technology.

PRODUCTION INCENTIVE PROGRAM

EPACT authorizes a program whereby consumer-owned electric utilities may qualify for payments from DOE equal to 1.5 cents per kilowatt hour of electricity generated from new solar, wind, geothermal and closed-loop biomass projects. According to the American Public Power Association (APPA), public power systems from 32 states have reported interest in developing over 1,800 megawatts of electricity using eligible renewable energy technology between 1993 and 2003, the timeframe of this program. The Sustainable Energy Budget supports APPA's request of $25 million for fiscal year 1994 for the renewable energy production incentive.

SUMMARY

We recognize that you must work within the constraints of the budget process and that there are competing interests for scarce federal dollars. To meet U.S. commitments under the U.N. Framework Convention on Climate Change signed last year, significant energy efficiency gains will need to be made in every sector of the economy and more energy will have to be produced from non-CO_2 producing sources. The renewable energy technologies supported by the Sustainable Energy Budget—wind, solar, biomass and geothermal—have the potential to contribute significantly to the achievement of our international and domestic economic objectives. The objective of the policies and budget outlined in the Sustainable Energy Blueprint and Sustainable Energy Budget is to triple U.S. renewable energy production by the year 2010. With your help, this objective can be achieved.

Chairman Johnston, you and your Subcommittee's accelerated support of renewable energy technology programs is extremely important. We look forward to working with you to take advantage of the enormous opportunities presented by renewable energy technologies for every sector of our economy and in the vast global market. We strongly believe that the recommendations of the Sustainable Energy Budget represent smart investments for our country. The Clinton administration's budget request for the renewables programs for fiscal year 1994 is an important step forward, and we strongly urge the subcommittee's support of these renewable energy programs. Thank you.

STATEMENT OF DWAYNE S. BREGER AND J. EDWARD SUNDERLAND, DEPARTMENT OF MECHANICAL ENGINEERING, UNIVERSITY OF MASSACHUSETTS

Researchers at the University of Massachusetts/Amherst (UMass) have prepared final plans for construction of the first U.S. Central Solar Heating Plant with Seasonal Storage (CSHPSS). The solar heating plant uses solar energy collected during the summer to heat buildings in the winter. The project will be a major milestone in the nation's development of solar energy and related thermal energy storage technologies and will serve as a catalyst to the active solar thermal industry. While the project requires government support for construction, future projects are expected to be accomplished in the private sector.

The Commonwealth of Massachusetts and the University are committed to this project and its implications for regional economic development, energy security and balance of payments, and environmental benefits. Through a combination of University, State, and private financing, 50 percent of the project cost will be secured on the State level. The federal government is requested to provide the remaining 50 percent through the Energy and Water Development Appropriations Subcommittee. The total construction phase budget is $4.8 million. A federal appropriation of $2.4 million is, therefore, requested.

The federal government has supported the U.S. CSHPSS project development to date with $650,000 in two grants which covered the site selection, preliminary design, and the final engineering design now being completed. These grants were appropriated through the Subcommittee and managed by the U.S. Department of Energy.

PAST FEDERAL SUPPORT OF CSHPSS

From 1979 through 1989, the U.S. Department of Energy supported the U.S. participation in the International Energy Agency (IEA), Solar Heating and Cooling Program, Task on CSHPSS. Over the past 15 years, over 30 CSHPSS projects have been constructed and monitored as part of the IEA collaboration. New projects are continuing to be planned and implemented by the participating countries.

From 1988 until the present, the focus of U.S. progress on CSHPSS has been the development of a first national project at the University of Massachusetts in Amherst. In 1987, the U.S. Congress appropriated through the Department of Energy $250,000 over two years for Phase I and II of the project development which included site evaluation and selection and preliminary design. Again in 1989 support from DOE was continued with a $400,000 appropriation for the Phase III final engineering design. Project development has verified the attractiveness of CSHPSS technology for U.S. building heating, and the appropriateness of the UMass site as a first project. The final engineering specifications for the project will be completed in August 1993 and the project construction procedure can begin immediately following.

BACKGROUND OF CSHPSS TECHNOLOGY

The United States uses approximately 15 quads of energy (26 quads of primary fuels) annually for the heating of buildings and water for domestic use. The application of solar energy to these loads is attractive due to the low temperature requirements of the end use. Past solar approaches to space heating in cold winter climates have not fared well technically or economically since the winter resource in northern climates is not adequate and is highly intermittent. Nonetheless, building heating requirements are closely correlated with the northern tier of the country.

The CSHPSS approach allows for efficient solar collection throughout the year to charge a thermal storage facility so that a sufficient heat source is prepared to meet nearly 100 percent of the winter space heating and annual hot water loads. Developments in northern Europe over the past 10 years have shown that, when implemented on a large scale, CSHPSS are very efficient and can provide cost competitive and reliable energy. The first U.S. CSHPSS project is currently being prepared for construction and provides an excellent opportunity to bring this technology to the U.S.

Seasonal storage of thermal energy from solar collectors is not a new idea. It was proposed in the U.S. in the 1960s and research projects were conducted in the 1970s. These early studies were applied to single residences or small groups of houses and were found to have low efficiency due to the small seasonal thermal storage. In the late 1970s, northern Europeans began to take a serious look at seasonal storage systems, but they were accustomed to viewing building heating within the framework of a district heating utility. Naturally, large scale systems were of interest to supply hot water to an existing distribution system or as the energy source for new district heating developments.

The early northern European experience evolved into an international research collaboration on CSHPSS within the International Energy Agency's (IEA) Solar Heating and Cooling Program which started in 1979. Since then, over 30 projects have been constructed and are now operating. Sweden and Denmark have constructed many of these projects and have greatly enhanced the technical and economical merits of the technology. The U.S. has participated in the IEA research on CSHPSS since its conception and can directly benefit from the lessons learned from the operating projects.

The CSHPSS concept is to store sufficient energy collected during the summer for use in the winter. Since the collectors operate unconstrained throughout the year, the collectors can deliver 2–3 times as much useful heat annually as those installed in diurnal systems. The charged thermal storage meets winter demands continuously, so systems are optimized to provide nearly 100 percent of the energy demand; a substantial advantage to diurnal systems with regard to national economic security and development and environmental quality.

On a large scale, construction of seasonal thermal energy storage in geological formations becomes economically and thermally attractive. Seasonal storage can be accomplished using boreholes in clay deposits or bedrock, confined aquifers, and excavated (water filled) rock caverns or earth pits. All these opportunities have been demonstrated in the IEA projects. Large scale solar energy development lends itself to third party turnkey projects which will assure prudent engineering design and operation and maintenance procedures and innovative project financing.

Unlike other solar technologies, all the components which make up a CSHPSS project are standard or well developed technologies; the innovative aspects which need to be demonstrated are the integration of the subsystems and feasibility of seasonal thermal energy storage. Unlike solar demonstration projects of the 1970s, this project is based on matured technology and over 10 years of international experience in system design, construction, and operation. Nonetheless, without a demonstration project, perceptual, economic, and institutional barriers to CSHPSS development in the U.S. will remain.

BENEFITS OF THE FIRST CSHPSS PROJECT TO THE UNITED STATES

The CSHPSS technology addresses the principle concerns for U.S. energy policy and criteria for support of renewable energy. No other solar approach to the building heating sector can provide the technical and economic merits as the seasonal storage approach. In particular, the following issues are highlighted.

Cost-Competitiveness.—Unlike other solar heating technologies, the seasonal storage approach allows for solar collector operation throughout the year, thereby maximizing the utilization of the collector. On a large scale, underground seasonal thermal energy storage is very efficient and can be constructed at low unit storage cost. For these reasons, the CSHPSS approach provides great improvement in cost effectiveness over conventional solar heating. Analyses throughout the IEA work have shown economically attractive CSHPSS applications and the UMass project also indicates cost competitive results compared to energy costs projected during this decade. The international experience with CSHPSS construction and operation has substantiated the analytical costs predicted in our investigation.

General Energy, Environmental, and Economic Benefits.—Unlike conventional solar heating technologies, the seasonal storage technology is designed to displace 100 percent of the heating and hot water loads. In addition, CSHPSS are designed for large building complexes or district heating applications so that one system displaces a very large amount of conventional energy needs. The implications for CSHPSS, therefore, to reduce our dependence on fossil fuels and the associated environmental damage, including global warming, are especially favorable. CSHPSS provides economic security against unpredictable energy prices and creates national employment in the manufacturing of solar collectors and local employment for their installation and the storage construction. The large order of solar collectors for a single CSHPSS project can provide the incentive for investment in cost improving mass production methods in the manufacture of solar collectors.

Unlike fuel costs, a large fraction of the cost of a renewable energy heating plants stays within the regional and national economy. The costs support labor, including engineering, geotechnical, construction, financial, and legal services, and capital investment, taxes, and business overhead.

Direct economic stimulation of project construction

Employment Stimulation.—Construction of UMass CSHPSS will directly stimulate the local and national economy in accordance with the desire of the Federal government. Of the $4.8 million construction phase budget, approximately 50 percent of the money can be attributed to supporting wages. This translate to the equivalent of 80 job-years at an annual salary of $30,000. Through the multiplier effect, this spending will support additional economic activity and wages.

Income Tax Revenue.—If we assume that the average Federal income tax on these wages is 20 percent, then the direct Federal income tax revenue from the project construction will be nearly $480,000. The estimated State income tax return on local wages to Massachusetts has been estimated at $ 100,000. Additional tax revenue will be produced through the multiplier effect of this spending.

Reduction of Institutional Barriers.—As a large and centralized technology, CSHPSS will evoke the prudent engineering and operation and maintenance which have been inadequate in past solar heating approaches. The technology can spur the adoption of mass production in the solar collector industry and makes use of large scale construction management, procedures, and equipment. The large scale provides access to established financial institutions which are essential as a capital source for solar technologies.

Technology and industry development

CSHPSS Technology.—CSHPSS projects will become more cost effective over time as solar collector costs decrease and energy prices increase. The UMass project will encourage the development of other projects around the country. By the second half of the decade, CSHPSS are expected to be financially feasible for private markets.

CSHPSS projects are designed to provide nearly 100 percent of large heating and hot water loads with solar energy in cold and cloudy winter climates. No other solar approach can effectively meet this large use of energy in the U.S. One CSHPSS project displaces the heating equivalent of hundreds of houses and avoids the engineering, financial, and institutional problems which have characterized the residential solar heating industry for the past 20 years. Due to their large scale, CSHPSS will necessitate prudent engineering, and financial commitments will assure careful operation and maintenance procedures. As a central plant, CSHPSS will ultimately be attractive for development by existing utilities or new thermal energy utilities. Furthermore, projects can fit naturally into the project development, financing, and customer metering currently used. The thermal utility model provides the long time horizon needed for project financing and separates the building owner or occupant from the capital and operational costs of solar energy.

In addition to the project as a whole, the CSHPSS subsystems will themselves demonstrate the use of technologies which have important applications under other circumstances.

Large Solar Collector Array.—The development and operation of a large collector array involves complexities not encountered with small distributed systems. Future large scale use of solar energy will involve large central collector arrays for thermal energy as well as electric generation.

Large Scale Thermal Energy Storage.—Thermal energy storage on a large scale can be integrated with utility waste heat, cogeneration, or other heat sources to enhance total system efficiency and flexibility. Applications can involve seasonal or short term storage, but on a large scale thermal energy storage becomes very efficient and economical. Thermal energy storage in subsurface geological structures is now well established and can take place without compromising the land use.

District Heating (using Low Temperature Hot Water).—District heating has important technical, economic, and security implications and these advantages are improved by the use of low temperature hot water. Hot water distribution can make use of plastic pipes and easy trench installation and are not subject to corrosion and expensive maintenance encountered with steam distribution. A new district heating system based on steam is dependent on a fossil fuel heat source, whereas hot water systems are flexible to switch over to solar or waste heat. District heating removes the cost and space requirement for individual heating systems and allows many buildings at once to switch heating source.

Low Temperature Building Space Heating.—Building space heating can be accomplished with low temperature thermal energy without major modifications or costs to HVAC equipment. Conventional HVAC design, however, is based on heating equipment fired by fossil fuels and temperature constraints are not a concern. Low temperature HVAC design adds great flexibility to switch to low temperature solar or waste heat sources during the building lifetime—thereby buffering the building owner from energy cost increases and price/supply instability. Due to the long lifetime of HVAC equipment, it is important that flexible systems be installed now.

Solar Collector Manufacturing and Solar Systems for Water Heating.—The solar thermal collector industry in the U.S. remains in its infancy and profound opportunities remain. Industry technology is available today which provides cost-effective and reliable products for main stream residential and commercial markets for water heating. The large CSHPSS project will focus national attention again on solar thermal technology and encourage dramatic industry growth in the very near term for water heating.

International Competitiveness.—CSHPSS technology is now demonstrated in nearly all European countries and Canada. Several countries, especially in northern Europe, are progressing rapidly with more projects. Climate and economic conditions in the U.S. are even better for CSHPSS. The technology of constructing large geologically based thermal energy storage facilities and the manufacturing of solar collectors for large collector arrays is well developed internationally but is absent in the U.S. From 1979 through 1989 the U.S. played an active role under U.S. DOE support in the International Energy Agency Task on CSHPSS. A new IEA Task on Advanced CSHPSS is now meeting as a Working Group and a formal Task is planned. The project development at UMass remains closely associated with the international activities, but without a U.S. project, the international connection will be severed and the U.S. technology will fall further behind.

Environmental Quality.—CSHPSS projects provide nearly 100 percent of energy needs for building and water heating. Therefore, they have great implications for displacing the burning of conventional fuels and the contributing to the reduction in pollution and global warming.

Each year, the UMass project will displace approximately 1 million pounds of coal burned at the steam plant in the middle of campus. Monetary values on environmental externalities costs are used by the Massachusetts Department of Public Utilities for electric generation planning. Using these figures, the 20 year present value of the environmental cost savings produced by the CSHPSS is estimated to be $700,000. Currently, no mechanism is in place to compensate the project for these benefits to society.

Public Awareness and Education.—The public is undeniably behind the use of solar energy and the role of government to support its development. The project at UMass will be a major tangible result of solar energy research and undoubtedly will receive a great deal of public awareness. After years of solar problems and neglect, the project will restore public confidence in the technical readiness of solar thermal energy. The project will draw much interest from the national and international solar research community and provide the research facility to monitor and evaluate system operation to improve future system designs and controls. The construction of the first project at a public university is also beneficial. The research group at UMass will continue R&D monitoring of the system and the project will provide an educational tool and means to distribute the technical knowledge to industry.

The public and media interest in this project and the role of federal support of renewable energy demonstration projects is well demonstrated by the broad media coverage of the CSHPSS project development. Articles on the project at UMass have appeared in all the local papers as well as the Wall Street Journal, New York Times, and Los Angeles Times. Feature articles have appeared in the ASHRAE Journal and Popular Science. The project has been the subject of local television news and public radio.

SUMMARY OF THE FIRST U.S. CSHPSS PROJECT

Project description

The site of the proposed first U.S. CSHPSS project at UMass will occupy roughly seven acres of land which is isolated from pedestrian traffic and has limited value for alternative use. The site is underlain by 100 feet of soft saturated clay which is a predominant geological feature of the region. Soft clay provides excellent characteristics for low cost and efficient seasonal thermal energy storage.

Two large buildings located across athletic fields from the project site will serve as the primary space heating and hot water loads for the CSHPSS project. The newly opened Mullins Memorial Arena is a new 10,000 seat multipurpose facility and its heating system has been constructed to accommodate the low temperature solar hot water heating source. The Boyden Gymnasium is an existing building with attractive retrofit opportunity. The total load for the CSHPSS project is approximately 3000 MWh or the equivalent of approximately 150 homes. The solar project will meet nearly 100 percent of the load and displace approximately one million pounds of coal burned at the campus central steam plant.

During the summer months (and throughout the year when feasible) solar thermal energy is collected and stored directly in the clay by circulating hot water through U-tubes which are to be pushed vertically through the clay. During the winter (and summer for hot water loads) heat is extracted from the clay using the same heat exchange pipes and distributed through a hot water district heating network to the loads. A steady state seasonal energy recovery of over 80 percent is common for large CSHPSS projects.

Work completed has verified the attractiveness of the site for the first national project. The geotechnical investigation has verified the quality and depth of clay for thermal storage. The integration of the project with the new Mullins Memorial Arena has brought a lot of interest to the solar project and will provide important exposure of the technology to a large number of people from within and outside the region. The project has been reported in local television news and national newspapers, as well as in national and international technical conferences.

The annualized cost of the energy supplied by the CSHPSS project is estimated at $0.065/kWh or $19/million BTU. This compares with a current average residential heating cost in Massachusetts of $10–12/million BTU for oil and gas and $0.12/kWh for electric resistance heating. The CSHPSS cost is expected to decrease significantly as the markets for seasonal storage and solar collector technologies expand. Conventional heating costs will rise and do not account for environmental damage and other disadvantages such as economic security, lost employment, and trade deficit. This first CSHPSS project will provide the opportunity for the technology to be commercially available and economically viable for the last half of the decade.

Construction funding status

The total construction phase budget for the CSHPSS project is $4.8 million. This amount includes installation of R&D level monitoring equipment and a low-level three year evaluation program. The researchers were unsuccessful at obtaining full federal funding last year and were recommended to seek 50 percent cost sharing. Efforts to secure the 50 percent State share is now in progress and very likely to succeed.

The $2.4 million share from the State is to be largely met by payments for the solar energy supplying the University and displacing University steam costs. The University Administration has agreed to this arrangement and has made available projected steam costs for the energy purchase contract lifetime. Through this energy purchase agreement, attractive financing has been offered by the solar collector manufacturer which is recommended by the project researchers to supply the solar collector array subsystem for the project. State funds to supplement the private financing capital, if necessary, is to come through a State appropriation.

In addition, the electric utility which services the University has indicated an interest in participating in the project. The utility is not able to support construction funds but will try to work out an arrangement with the University to provide in-kind assistance—particularly in the form of electric operating power for system pumps and controls.

PROPOSED FUNDING AND SCHEDULE FOR PROJECT CONSTRUCTION

Based on the system final engineering work to date, the researchers are prepared to specify the cost of project construction. Additional costs are required to cover engineering support and system monitoring and evaluation. Once constructed and tested, the University Physical Plant will take over the responsibility of system operation and maintenance.

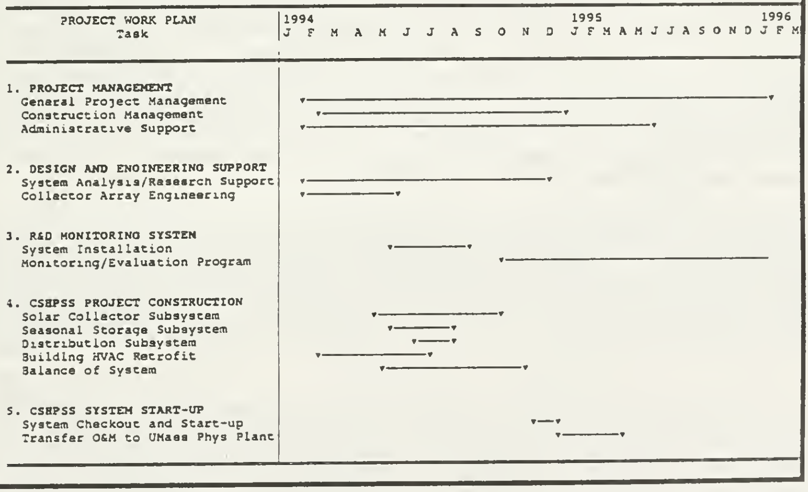
The budget requested for project construction and research support is shown in Table 1. A schedule of the work plan is shown in Table 2. The project construction can be accomplished within one year. An R&D monitoring program is planned to evaluate system operation for the first two years of operation.

TABLE 1.—*Budget for first U.S. CSHPSS project construction*

Task 1. Project management:	
General project management	$100,000
Construction management	75,000
Administrative support	50,000
Subtotal	225,000
Task 2. Design and engineering support:	
System analysis and research support	125,000

Collector array engineering specifications	150,000
Subtotal	275,000
Task 3. R&D monitoring system:	
System installation	250,000
Monitoring/evaluation program	150,000
Subtotal	400,000
Task 4. CSHPSS project construction:	
Solar collector subsystem	2,250,000
Seasonal storage/buffer tank subsystem	675,000
Distribution subsystem	350,000
Building HVAC retrofit (Boyden Gym)	240,000
Balance of system	130,000
Subtotal	3,645,000
Subtotal (tasks 1–4)	4,545,000
University overhead	255,000
Total budget	4,800,000
State cost sharing, 50%	2,400,000
Federal cost sharing (requested), 50%	2,400,000

TABLE 2. CSHPSS PROJECT CONSTRUCTION WORK PLAN AND SCHEDULE



STATEMENT OF THE NAVAJO NATION

The Navajo Nation appreciates the opportunity to submit the Navajo Nation's request to this subcommittee and to make recommendations within the appropriations process for fiscal year 1994. The Navajo Nation looks forward to working with this subcommittee and with the new Administration.

We have three requests to present to this subcommittee:

1. Full funding of section 2603 of Title 26—the Indian Energy Resources of the Energy Policy Act of 1992;

2. A matter we first raised with the subcommittee last year—assistance on the joint venture between Navajo and the Western Area Power Administration (WAPA) to build the Navajo Transmission Project; and

3. Direct funding to the Navajo Nation, through the Bureau of Reclamation, to support the management and development of Navajo's scarce and precious water resources.

Indian Title to the Energy Policy Act—title XXVI

The Navajo Nation is proud to have taken a leadership role in developing the Indian title to the Energy Policy Act and to work with Congress to ensure its enactment. The objective of Title 26 is to assist tribes in assuming greater independence in the management and regulation of their energy resources. Indian tribes—can and should—become important new players in energy development, particularly in power generation, transmission, and distribution. We can do so in a manner that ensures that resource development activities are consistent with our goals of environmental protection and preservation of tribal values and culture.

Section 2603. Promoting energy resource development and energy vertical integration on Indian reservations

The Navajo Nation is seeking maximum funding under each of the programs authorized under Section 2603. Section 2603(a)(1) is a development grant program that serves as the foundation for all of the other provisions. This section authorizes $10 million for grants to assist tribes in developing the necessary managerial and technical capability to fully utilize the energy resources on their reservations. With funding from this title, Navajo and other tribes will be able to establish their own energy offices. For the Navajo Nation, a "Navajo Energy Office" could launch, coordinate, and oversee such projects as the proposed Navajo oil and gas company and the Navajo Transmission Project that are discussed below. The full $10 million authorized is needed, since for Navajo alone, our proposed energy office is estimated to be in the range of $1.2 million.

Section 2603(a)(2) and 2603(b) are a vertical integration grant program and a loan program, respectively, designed to assist in the development of specific projects. For example, Navajo is planning an oil and gas company that would acquire and develop gas properties and then market, refine and retail the various products produced on Navajo lands. The proposed oil and gas company is estimated at $7.45 million. At a time when the United States is experiencing a decrease in the development of domestic reserves, tribes can help to insure that new drilling occurs and existing marginal fields continue to produce. These two programs can also be used to help provide preconstruction costs for the Navajo Transmission Project. Because the need is so great and because Indian tribes have received little funding over the years from the U.S. Department of Energy (DOE), we urge the Subcommittee to fully fund all three of these programs under Section 2603.

Navajo transmission project

Last year, the Navajo Nation first introduced to the Congress its plans to joint venture with WAPA on a ground-breaking 4,000 mile 500kv transmission line from the Four Corners area to the California border. For the Western utility system, this project is a key to unlocking the excess generation that now exists in the Southwest, thus increasing the efficiency of electric energy delivery and conserving the use of more expensive and less available fuels, as well as, eliminating the Four Corners' bottleneck, a top WAPA priority for many years.

In the past, the Navajo Nation merely leased its land to WAPA or a private utility in order for them to build a line across Navajo lands. Rather than being a passive lessor of Navajo land, the Navajo Nation will be a co-owner and developer of the proposed line, working through its energy development enterprise, Dine' Power Authority (DPA). (Dine' is the Navajo word meaning "the People".) It will be the first tribally-owned power line (and major independently owned) transmission line in the country. It will give the Navajo Nation an active role in energy-related activities on its lands, will create over 200 badly needed jobs on a reservation facing an average of 36% unemployment, and will provide transmission capacity and access to the fastest growing power market in the Southwest.

In the Report accompanying this subcommittee's FY'93 Appropriations, it was requested that WAPA work closely with Navajo on this project. WAPA has complied with this request to the fullest extent and we have developed a close, cooperative working relationship. Navajo and WAPA have entered into agreements for joint development of the project, under which Navajo, through DPA, will own 60 percent of the capacity and be responsible for 60 percent of its cost. WAPA will own and be responsible for the remaining 40 percent. Using existing WAPA FY'93 funding, work has begun on the Environmental Impact Study (EIS), along with other preconstruction activity. WAPA has given DPA a major role in the EIS effort and the two parties are working together effectively in a strong team effort.

In the FY '93 Report, this subcommittee also said that it will entertain further requests for the project in "accordance with the established legal requirements and financial authorities." Over the past year, Navajo has explored these authorities and is now prepared to present to this subcommittee several options for further support through this appropriations process.

The total construction costs for the project will be approximately $400 million. Navajo has entered into an agreement with Merrill Lynch, to raise Navajo's 60 percent share of this amount through private debt financing. We have been assured that this will be a highly financeable project.

The predevelopment costs are estimated to be in the range of $16 million, the largest portion of which is for the EIS. WAPA expended a little over $1 million in FY '93. If Navajo had to fund 60 percent of the remaining predevelopment costs, it would be required to provide $10 million over the next two years. This would represent five percent of the total Navajo Nation budget and would place an impossible strain on our government. Navajo has already made significant contributions to the project to bring it to this critical stage. We have invested several million dollars over the past four years by funding the DPA staff and consultants who are developing the project concept. We continue to make in-kind contributions of our staff and resources to support predevelopment activities.

Based on our review over the past year, we believe there are several different funding mechanisms the subcommittee can use to assist Navajo and WAPA in addressing this preconstruction cost issue. Such options are as follows:

1. Provide sufficient funding to WAPA to pay for all of the predevelopment costs and require that 60 percent of this amount will be credited toward the project's construction costs.

This option would require WAPA to fund the entire $16 million in preconstruction costs and then have its construction obligation reduced by that amount, while Navajo's would increase by an equal amount. Navajo believes that it will have little difficulty in coming up with this additional share of the construction costs. Effectively, this means that WAPA will be taking $10 million it would have spent in FY '96 or FY '97 for construction and moving it up to FY '94 and FY '95 for preconstruction costs. If the Subcommittee accepts this approach, there are two ways it could provide the funding:

(*a*) Direct WAPA to fund the predevelopment costs out of its regular FY '94 appropriations, unless, of course, WAPA can demonstrate that reallocation of the $5 million to the Navajo project will cause hardship to other WAPA programs in FY '94; or

(*b*) Provide a $5 million add-on to the WAPA budget for this purpose.

2. Appropriate funds for the Indian Vertical Integration Grant Program for the purpose of funding Indian Transmission Projects.

As mentioned above, section 2603(a)(2) of the Energy Policy Act authorizes $10 million a year for grants to projects that promote the vertical integration of the energy resources on Indian reservations, including the transmission of electricity. NTP would be an example of such an Indian vertical integration project. If this grant program were funded, the Subcommittee could urge DOE to grant $5 million a year for two years to Indian transmission project such as the Navajo Transmission Project.

Navajo water resources

On all Indian reservations water is life. Only with adequate and assured supplies of water in the arid and semi-arid west will Indian peoples be afforded the long-term prosperity and well-being we seek. The Navajo Nation in particular has never benefited from a coherent and comprehensive approach to assessing, developing and managing the Nation's scarce and precious water resources. We look to this Subcommittee to assist in addressing this critical need. The Navajo Nation notes that this is our first-ever request for direct appropriations to the Bureau of Reclamation.

Coherent coordinated management and development of the water resources of the Navajo Nation are of paramount and critical importance to ensuring the adequacy of water supplies for present and future generations of Navajo people. The primary water resources needs of the Navajo people include water for domestic and municipal uses; for cultural and environmental purposes, including fish and wildlife habitat; for irrigation and livestock; for recreation; and, for commercial and industrial purposes. There has never been a systematic effort either to inventory, to monitor, to develop or to manage Navajo water resources in accordance with Navajo present and future needs.

The Nation requests that this Subcommittee enable and encourage the Bureau of Reclamation to bring to the Navajo Nation the same level of attention, expertise and assistance which have so long benefited other regions of the arid and semi-arid west—and made possible the prosperity of the west. This assistance has never been available to the Navajo Nation or other Indian tribes on any scale commensurate with the magnitude of Navajo and Indian water resource development and management needs or rehabilitation or reconstruction of Indian dams. We are submitting two requests for funding to the Bureau of Reclamation for Navajo Nation needs:

(1) The Navajo Nation is seeking appropriations of $1,000,000 for those unfunded authorizations of Title 2 of the Emergency Drought Relief Act of 1991 for the Bureau of Reclamation to take a lead role among federal agencies to assist the Navajo Nation in the preparation of a comprehensive Water Resources Management and Development Plan.

(2) The Navajo Nation is seeking $100,000 in appropriations to the Bureau of Reclamation to fund Navajo participation in the "adaptive management" implementation of the Glen Canyon Dam operations, upon the completion of the Glen Canyon environmental studies.

In conclusion, the Navajo Nation wishes to thank the Subcommittee for the support provided last year and looks forward to working with the subcommittee on the funding initiatives proposed in this testimony. Accordingly, detailed justification packages have been prepared and will later be presented to subcommittee staff in support of this testimony.

STATEMENT OF THE NATIONAL GEOTHERMAL ASSOCIATION AND THE GEOTHERMAL RESOURCES ASSOCIATION

Mr. Chairman and members of the Subcommittee, I am Dr. Phillip Michael Wright and I am Technical Vice President of the University of Utah Research Institute. It is also my honor to be the President-Elect of the National Geothermal Association and a member of the Geothermal Resources Association. I am here today representing the combined view of these associations that our nation sorely needs an aggressive National Geothermal Program, funded at a meaningful level, with full participation and cost sharing by the American geothermal industry. We are requesting that you provide $61.4 million for the program discussed below, which we have developed with a great deal of thought and participation by industry, university, and government representatives.

During the late 1970s, the Department of Energy's geothermal energy R&D program reached funding levels of $150 million per year. This support, together with efforts of the private sector, resulted in the birth of an industry which now has $10 billion in assets in the U.S. and an installed generating capacity of nearly 3,000 megawatts, enough to supply the needs of 3 million people. However, during the 1980s, the geothermal budget was cut drastically, both in the Department of Energy and in the U.S. Geological Survey. Budget cuts continued through the Bush Administration, even when budgets for other renewable technologies were increasing. This funding problem is very difficult to understand or to rationalize. Objective analyses by the Energy Information Administration (presented in SR/NES/90–04 and DOE/EIA–0561), the Environmental Protection Agency (presented in EPA/400/R–92/005), and the Union of Concerned Scientists (cited in DOE/EIA–0561), among others, clearly show that geothermal energy has a very large resource base and one of the highest potentials for electrical generation of any of the renewable technologies to the year 2030 and beyond. EIA studies further show that an enhanced program in geothermal R&D would significantly accelerate power on line over a business-as-usual program, and would result in a total grid-connected generation capacity exceeded only by hydropower among the renewables. The R&D program we are presenting today will change the destructive funding trend of the past decade and will move our industry forward again.

Environmentally, geothermal energy provides great benefits to society. By using geothermal electrical power generation instead of coal-fired generation, the geothermal industry has kept 120 million tons of carbon dioxide, 1.3 million tons of sulfur dioxide and 0.5 million tons of nitrogen oxides out of the atmosphere in the U.S. in the last five years alone. Clearly, the world's environment could benefit from further development of this clean technology.

The demand for energy in developing countries, their need to utilize clean, indigenous resources and the broad occurrence of geothermal energy in the developing world all signal enormous opportunity for the export of U.S. geothermal goods and services, with the creation of new jobs here at home. Many developing countries are seeking private investment to expand their industrial infrastructure and alleviate shortages of electricity. We estimate that 80,000 megawatts of geothermal power generation could be brought on line in developing countries in the next three decades using hydrothermal resource sites known today. However, time is critical. An enormous increase in fossil-fuel fired generation is being planned and constructed throughout the Third World. If the opportunity is lost to furnish a significant amount of new capacity with geothermal resources, and the needed power is supplied by fossil plants, their pollution streams will burden an already strained environment for decades. The program we are recommending will give the U.S. geothermal industry the competitive technological edge in supplying geothermal power abroad. As part of our export strategy, we are also working with others in Congress and the Administration to mitigate the effects of tied aid and predatory pricing practices used by our foreign competitors.

Of the several types of geothermal resources, only hydrothermal resources have been commercially used. And of all the hydrothermal resource occurrences, less than 15 percent can be economically used with today's limited technology. Ultimately hydrothermal resources may be capable of furnishing 30,000 megawatts of electrical power in the U.S. However, the heat contained in hydrothermal resources is only a small fraction of the total amount of heat available in the earth's crust. Using determinations by the U.S. Geological Survey of the amount of thermal energy in rocks at depths between 3 and 7 km, we estimate that 1 billion megawatt-years of electrical power could be generated from only 1 percent of this thermal energy. Geothermal energy could supply a substantial part of U.S. demand for thousands of years. Thus, the ultimate potential for clean, domestic geothermal energy to contribute to our energy needs is truly enormous. New and improved technology is the key to unlocking the clean energy future that geothermal resources promise.

In addition to supplying energy, geothermal technology can also help save electricity and natural gas. Geothermal heat pumps (GHPs) are the most efficient technology available to heat and cool homes, schools and other buildings. European countries are well ahead of the U.S. in use of this technology. Due to their high efficiency, geothermal heat pumps can cut the amount of generating capacity utilities across the U.S. must have. GHPs can be used in any region of our country. It is not unreasonable to expect that a reduction of 10 percent in our total electrical consumption would result from widespread use of geothermal heat pump technology.

However, Mr. Chairman, the promise of geothermal energy will not be realized without your help and support to carry out the program we are recommending today. The fledgling geothermal industry is unable to provide on its own the technology improvements that are required. Developers are comprised mainly of small- and medium-sized entrepreneurial companies. We are facing rising competition from Japan, Italy, New Zealand and France, among other countries, for superior geothermal technology and construction of energy infrastructure in developing countries. We urge you to consider favorably our recommended geothermal technology R&D program.

RECOMMENDED GEOTHERMAL TECHNOLOGY DEVELOPMENT PROGRAM

Base program, $24.4 million.—The Geothermal Energy R&D Program of the U.S. Department of Energy works in partnership with industry and utilities to reduce the life-cycle cost of producing electricity and using heat directly from geothermal resources. National Energy Strategy projections indicate that as much as 10,000 MWe of geothermal electric power can be achieved by the year 2010 with only a modest geothermal program. With an aggressive program, this amount could be tripled. Today, geothermal-hydrothermal technology produces competitively priced electricity from 2,100 MWe of operating capacity in three states. However, current technology remains-limited economically to those few locations where the quality and quantity of the resource is proven from extensive exploration, drilling, testing, and production. The base geothermal energy program focuses on four principal cost-sensitive technology areas: 1) exploration technology to locate the highest potential reservoirs; 2) reservoir engineering and management technologies to prolong reservoir lifetimes; 3) drilling technology to reduce costs; and 4) conversion technology to increase plant efficiency and reduce operating costs. Moreover, the program provides the research needed to enhance U.S. technological competitiveness in domestic and foreign geothermal markets, and promote economic recovery and creation of jobs by expediting the growth of power on line domestically and internationally.

Advanced applications

Industry-coupled drilling, $6.5 million.—Rapid geothermal development during the late 1980s was based on the exploration and discovery activity of the 1970s. The inventory of undeveloped, proven geothermal reserves is now at an all-time low, and new discoveries are needed to sustain future development. Deep drilling is needed to discover and confirm the existence of new geothermal resources. The odds of discovery are low for any individual drilling project, and so a substantial amount of drilling must be undertaken to find the many hidden resources whose existence is geologically indicated. In this economic climate, the industry needs the government to share costs for this high-risk, wildcat exploration. A similar DOE program in the 1970s had a 60 percent success rate for resource development. The impact of a joint-venture program in exploratory drilling will accelerate the growth of electrical generation from geothermal resources, resulting in doubling geothermal generation to an estimated 5,400 MWe within five years.

Fluid injection at The Geysers, $6.0 million.—Joint, cost-shared R&D programs have been established with operators at The Geysers geothermal dry-steam field to investigate key issues relating to maximizing the useful output of the reservoir. Examples of programs are testing the use of seismic signals to locate areas of steam, developing chemical tracers to aid in determining reservoir flow patterns, and testing various injection schemes to identify the most effective methods for replenishment of the reservoir. In addition, a cost-shared effort has been initiated to obtain deep core samples to establish the geological characteristics of the reservoir. The Government's investment in helping industry to understand The Geysers will ensure the continued production of economic energy from this huge resource, thus securing the jobs of those employed in the plants and in associated regional businesses. In addition, the experience gained at The Geysers will be applicable to management of reservoir at other sites utilizing geothermal energy.

Advanced exploration technology, $2.0 million.—Currently, the geothermal industry is hampered by outmoded, ineffective, and expensive exploration technology that is a holdover from the petroleum industry. New techniques are needed to find the large number of geothermal systems in areas where there are no hot springs or steam vents on the surface. Costly, deep drilling is the only exploration method currently available to confirm the discovery of geothermal resources. Industry leaders have identified the critical need for new and improved exploration methods to develop the very large geothermal energy resource base. Cost-shared joint ventures with private industry to develop and test innovative exploration methods would lay the cornerstone upon which the geothermal industry could develop a conservatively estimated 30,000 megawatts of electricity over the next 30 years. Technology developed for geothermal exploration will most likely be transferrable to the petroleum and mineral industries.

Advanced systems

Revolutionary drilling systems, $4.5 million.—The Advanced Drilling and Excavation Technology Program will investigate and develop unconventional drilling systems to dramatically reduce the costs of penetrating rock and soil materials. With industry cost-sharing and joint-venture R&D opportunities, the early phases of the program are expected to produce evolutionary improvements in the short term to enhance current drilling systems. In the long term, new unconventional technology innovations will make drilling more economic, creating jobs in numerous industry sectors, including energy, mining, tunneling and environmental applications, and provide the U.S. with the ability to regain world market share in drilling and excavation projects.

Advanced energy conversion, $5.0 million.—This program will develop new technology to provide step-change improvements in the performance and cost of geothermal power plants. The goals are to reduce plant costs, improve geothermal fluid utilization, develop heat-rejection systems that conserve water, improve designs and materials to mitigate corrosion and scaling, and develop advanced designs for plants that improve energy-conversion efficiency. This initiative would enable the geothermal industry to develop a vast reserve of untapped resources that do not necessarily have favorable siting and reservoir characteristics, resulting in industry expansion and creation of new jobs. Such an expansion would also decrease our dependence on foreign oil and reduce environmental damage from carbon dioxide and acid-rain producing emissions. Structured as a cooperative government-utility-industry effort, significant support and funding would come from organizations representing the utilities (e.g., EPRI), the independent power producers, and power-plant manufacturers.

Hard hot rock industry demonstration project, $6.5 million.—This project involves rapid completion of the ongoing Fenton Hill Hot Dry Rock (HDR) experiment and then a redirection of the program under a fundamentally revised management approach that will retain the scientific and technical capability of Los Alamos National Laboratory while assigning the major responsibility for field demonstration to industry. A joint DOE/industry cost-shared venture will be undertaken at a second site under industry leadership. This will assist industry in integrating HDR technology into their operational base, and accelerate commercialization by the first decade of the 21st century. Hot rocks at depth in the earth can potentially supply a vast new class of geothermal resources within the technical and economic grasp of the U.S. geothermal industry by the year 2000, with a resource that occurs throughout the area of the U.S. and the world.

Market acceleration

Geothermal heat pumps, $1.5 million.—Geothermal Heat Pump (GHP) technology is a prime candidate for utility integrated-resource plans and demand-side reduction since heating, cooling, and water heating, the needs served by GHPs, account for 25 percent of the Nation's total electric consumption and are a source of utility peak loads. Both the Energy Information Administration and the Environmental Protection Agency project major growth opportunity for GHP installations, shaving tens of thousands of megawatts from the Nation's required generating capacity, and resulting in the savings of emissions from fossil-fired power plants. DOE will cosponsor R&D efforts to reduce the cost and time of installing the GHP ground loop with the electric power industry, manufacturers, and state energy offices.

Pacific Northwest initiative, $3.5 million.—The four-state Pacific Northwest anticipates electric power shortfalls within the decade, due in part to the premature shutdown of nuclear reactors and the loss of hydro-power generating capacity to accommodate endangered species of fish. The Bonneville Power Administration (BPA) has competitively selected three geothermal proposals in the 10 to 30 MWe range for negotiation of favorable power contracts. BPA's intention is to initiate development at these sites with the expectation that unsubsidized geothermal development to at least 100 MWe will follow in each case, and that success at these sites will stimulate independent geothermal development throughout the region. The Department of Energy geothermal program will contribute to the achievement of regional energy goals by testing advanced technical concepts such as slim-hole drilling and advanced heat-rejection technology at these BPA sites. The successful development of geothermal energy at these sites will spur geothermal development at other sites in the Northwest, in part because of the proven economic benefits but also because of the reduced lead time for meeting environmental requirements. This initiative would be a stimulus to the geothermal industry and result in expansion of the industry and the creation of jobs. The site developers would share the cost of the heat rejection equipment and slim-hole drilling.

International export initiative, $1.5 million.—The growing worldwide demand for geothermal power represents a large potential market for U.S. technology and equipment. Estimates of the size of the geothermal market in developing countries range to more than $6 billion per year over at least the next twenty years. U.S. involvement in foreign geothermal projects would result in jobs, services, and purchase of U.S.-made equipment. More than 60 percent of total project expenditures would return to the U.S. Using this figure and a total estimated cost of $3,000 per developed megawatt of electrical power generating capacity, direct benefit to the U.S. economy could be as great as $65 billion during the next 20 years. A program of cost-sharing and loan guarantees for projects will be implemented to secure U.S. participation in the emerging international market.

BIOFUELS ENERGY PROGRAMS

STATEMENT OF THE BIOMASS ENERGY RESEARCH ASSOCIATION

This statement pertains to the Department of Energy research appropriation on biofuels. The Biomass Energy Research Association (BERA) recommends that $96.0 million be provided for biofuels research in fiscal 1994. This budget will permit the essential research to be performed and key demonstration projects to be initiated with direct industry involvement and cost sharing. BERA recommends that the funds be allocated in the following manner. BERA also recommends that any earmarked funds that are appropriated for specific projects be added to and not deducted from this budget.

Cognizant conservation and Renewable Energy Office/Area	Recommended budget—	
	Research	Scale-up/demo
Office of Transportation Technologies:		
Biomass production	$6,000,000	$10,000,000
Biochemical conversion	18,000,000	14,000,000
Thermochemical conversion	11,000,000	

Cognizant conservation and Renewable Energy Office/Area	Recommended budget—	
	Research	Scale-up/demo
Subtotal	35,000,000	24,000,000
Office of Utility Technologies: Electric power production	6,500,000	
Office of Industrial Technologies: Municipal solid wastes and chemicals	6,000,000	
Office of Building Technologies: Combustion		500,000
Office of Technical and Financial Assistance: Regional Programs	10,000,000	
All offices: Cost-shared demonstration projects	11,000,000	
Capital equipment	3,000,000	
Total	61,000,000	35,000,000

I am Donald Klass, President of BERA. BERA is a non-profit association headquartered in Washington, D.C. BERA was founded In 1982 by biofuels researchers and companies that are conducting biofuels research. Our objectives are to promote education and research on renewable biomass energy and waste-to-energy systems that can be economically utilized by the public, and to serve as a source of information on policies and programs for our members and industry.

We appreciate the opportunity to present BERA's recommendations for the federal biomass and municipal waste research budget. Before presenting the details of BERA's position and recommendations for the fiscal 1994 budget, I would briefly like to point out how biofuels can play an important role in our National Energy Strategy and in meeting the requirements of the Clean Air Act Amendments of 1990 and the National Energy Policy Act of 1992.

Relationship to economic growth

Biofuels are the only renewable energy resource that can provide desperately needed local jobs and economic development nationwide for Americans. Biofuels provide excellent regional benefits—80 cents of every dollar spent on biofuels in a given region stays in the region, while 80 cents of every dollar spent on petroleum leaves the region. Also:

—Recent studies indicate that use of biofuels sustains hundreds of thousands of jobs and creates several billion dollars in personal and business income throughout the U.S.A. For example, one study of the economic impact of biofuels in the Southeast concluded that industrial wood energy alone generated 71,000 jobs and one billion dollars of income in 1987. Studies of other regions of the country arrived at similar conclusions.

—Utilization of excess capacity croplands of up to about 160 million acres projected beyond the year 2000 could open the way to new food, feed, and fuel flexibility to provide more stability to market prices, create new markets for the agricultural sector, and reduce federal farm subsidy payments.

—At a price of $20 per barrel of oil equivalent, biofuels currently retain in the U.S.A. about $11.0 billion per year that are not expended on oil imports thereby having a strong beneficial impact on our massive trade deficit.

—Virtually all basic organic chemicals—including plastics and petroleum-derived products—can be manufactured from biomass and wastes thereby displacing and conserving depletable fossil feedstocks.

Biofuels can help clean up the environment

It is important to emphasize the role that biofuels can play in achieving a cleaner environment. Use of biofuels such as methanol, ethanol, and other oxygenated biomass derivatives, can have a strong beneficial impact on air quality, particularly as alternative liquid transportation fuels. And the growth of biomass is the only practical way to remove carbon dioxide from the atmosphere and ameliorate global climate change. Further, biofuels is the only energy resource that can be utilized both to remove atmospheric carbon dioxide and to reduce the amount of fossil fuels burned. Also:

—Displacement of fossil fuels by biofuels can eliminate and reduce atmospheric pollutants such as sulfur oxides, ozone, and unburned hydrocarbons, all of which contribute heavily to sub-quality air.

—Application of biofuels technologies to wastes offers opportunities for combined waste disposal-energy recovery-conservation systems and environmental cleanup.

Relationship to energy security

Biofuels can provide a strategic and distributed network of renewable energy supplies for the United States since agricultural crops and woody biomass as well as industrial and municipal wastes are available continuously throughout the United States. In 1990, about 3.3 percent of total primary energy consumption in the United States, or 2.8 quad, was supplied by biofuels. Conservatively, the energy available each year on a sustainable basis from biomass and wastes has been variously estimated to range up to about 15 quad per year, while the energy potentially available each year has been estimated to be as high as 54.9 quad. The most optimistic estimates indicate that:

—Herbaceous biomass and agricultural residues have a domestic energy production potential of 15.0 quad/yr.

—Wood and wood wastes have a domestic energy production potential of 25.0 quad/yr.

—Biofuels are import substitutes for all fossil-based liquid, gaseous, and solid fuels.

BERA RECOMMENDS $61.0 MILLION FOR RESEARCH AND $35.0 MILLION FOR SCALE-UP PROJECTS FOR FISCAL 1994 BIOFUELS APPROPRIATION—A BALANCED PROGRAM OF RD&D AND TECHNOLOGY TRANSFER

Our recommendations comprise a balanced program of feedstock production and conversion research and technology transfer to the private sector with emphasis on end uses such as alternative liquid transportation fuels and on innovative municipal solid waste disposal-energy recovery systems having superior environmental benefits and minimal emissions. We also urge that demonstration projects be added to the program so industry cost-shared scale-up work can be initiated as early as possible.

The following represents BERA's recommendations on the research areas and the funding levels we urge you to include in the fiscal 1994 program.

Office of Transportation Technologies

Biomass production.—Land and/or water-based biomass grown and harvested specifically for liquid biofuels represents a long-term approach to energy plantations that can supply large amounts of fossil fuel substitutes. Considerable progress has been made on efficient short-rotation woody crops, and on the growth of herbaceous species. Considerable progress has also been made on development of "wood grass," in which carefully chosen tree species are grown in close-spaced plantings and harvested like a perennial grass over short rotations. In addition, research on tissue culture techniques and the application of genetic engineering methods to low-cost energy crop production have shown promise. This work should be continued as an integral part of the biofuels research program.

BERA recommends that $6,000,000 be directed to continue biomass production research. This research is essential to develop advanced biomass production methods to meet expanding biomass energy utilization; conventional production methods are simply not adequate to supply biomass energy over the long term.

BERA also recommends that scale-up projects of at least 1,000 acres in size be initiated to develop large-scale, commercial energy plantations in which dedicated energy crops are grown and harvested for use as biomass resources. After the plantations are established, small conversion facilities should be added to develop integrated biomass production-conversion systems. These projects should be strategically located and should utilize the advanced biomass production methods developed from the research effort conducted to date. Successful completion of this work will help biomass energy attain its potential by providing the data and information needed to design, construct, and operate new, multi-quad energy supply systems for the manufacture of fossil-fuel substitutes.

BERA recommends that the first year of this scale-up program be funded at $10,000,000.

Biochemical conversion.—Application of the rapidly advancing field of biotechnology to the conversion of low-cost biomass to liquid fuels such as ethanol has made great progress and should be continued. Process evaluations by experts have identified key opportunities for early pay-backs with biochemical conversion systems, and new genetic engineering and other emerging biological approaches have made significant advances. Future research should be concentrated on conversion of low-cost feedstocks by high-yield acid and enzyme-catalyzed hydrolysis processes, on the development of organisms that can metabolize the hemicellulose components in the feedstocks, and on the utilization of the lignin fractions as octane enhancers and chemicals. Research is also recommended on the use of genetically engineered bacteria that can produce ethanol from low-cost feedstocks at higher rates and yields and on innovative processes for the production of butyl alcohols for conversion to methyl-tbutyl ether (MTBE) and ethyl-t-butyl ether (ETBE) gasoline additives.

BERA recommends that $18,000,000 be directed to continue biochemical conversion research for transportation applications.

BERA also recommends that $14,000,000 be directed to scale-up the fuel ethanol process in which low-grade cellulosics are utilized as feedstock. Successful completion of this work will establish the technical feasibility of the process and help to confirm that fuel ethanol can be manufactured from non-foodstuffs at prices competitive with petroleum-based motor fuels.

Thermochemical conversion.—Thermochemical conversion research to produce clean-burning, liquid transportation fuels at competitive costs Is the prime target of this program component. Laboratory- and pilot-scale research has established the technical feasibility of several advanced liquefaction processes, and basic research has improved our understanding of the mechanisms of conversion. Direct conversion of wood and herbaceous feedstocks via pyrolysis to liquid fuels and their upgrading by advanced catalytic processes to transportation fuels show promise. Chemical blocking reactions for the upgrading and stabilization of liquid pyrolyzates should be investigated to produce product for use as gasoline additives and as octane-enhancing agents. Continued research is expected to increase the overall liquid yields to the point where the gasoline costs are competitive with those of petroleum-based fuels. Thermochemical liquefaction of low-grade biomass for the production of low-cost fuel ethanol or mixed alcohols also shows promise and merits investigation.

BERA recommends that $11,000,000 be directed to continue thermochemical conversion research for transportation applications.

Office of Utility Technologies

Electric power production.—Currently, there are about 8,000 MW of on-line electric power capacity fueled with biomass. Development of advanced gasification processes have significant economic and environmental benefits that could lead to further expansion. Continued research on the thermochemical gasification of biomass has resulted in the development of advanced process designs and reactor configurations that maximize product yields and provide optimum product distributions. This work has been performed at the laboratory and pilot scales and is being demonstrated for power production via medium-Btu gas. This scale-up project should also include demonstration of fuel methanol production, which can easily be adapted to the demonstration plant. Direct coupling of advanced biomass gasifiers to steam-injected gas turbines (STIGS) should be evaluated as a potential, high-efficiency power generation system. An alternative that should also be evaluated is the integration of high-yield biomass pyrolysis liquefaction processes with power generation either in STIGS or combined-cycle STIGS.

BERA recommends that $6,500,000 be appropriated for this research.

Office of Industrial Technologies

Municipal solid wastes.—In combustion research, a need still exists for improved solid waste cumbustors that meet environmental requirements and cost goals. Research should be focused on systems that can be used for economic disposal of municipal solid wastes in small communities. Research is also needed to reduce the emissions of solid waste disposal processes and to characterize the specific pollutants produced under specific operating conditions. Other subjects needing additional research are the monitoring and control of combustion effluents, metal behavior in ash, and characterization of the changing waste streams. Since relatively mature industries are involved, this is an area for cost-shared development and demonstration activities. Biochemical gasification of wastes is unique in that the process can directly produce methane, the major component of natural gas, from the full range of low-cost biomass. Research is needed to develop novel systems that permit higher feedstock concentrations and smaller reactor volumes, and therefore lower capital costs. This research is expected to lead to practical methods for economic production of methane from low-cost biomass. And in the case of feedstocks such as municipal wastewaters, low-cost, integrated biomass production-waste stabilization-methane production systems are expected to evolve from continued research.

Chemicals.—A wide range of petrochemical substitutes can be manufactured from biomass residues, such as solvents, adhesives, plastics, packaging materials, and chemicals such as organic acids. Research should be continued to develop advanced processes that utilize both thermochemical and biochemical conversion methods as well as physical separation and processing techniques.

BERA recommends that $6,000,000 be directed to continue research on both municipal solid wastes and chemicals from biomass residues.

Office of Building Technologies

Combustion.—Funding should be provided to support a modest research program on advanced, pollution-free, wood- and pellet-fueled stoves and furnaces for homes and small commercial and institutional buildings. Air-pollution problems continue to be of great concern in certain western and eastern areas, and stove and furnace efficiencies, catalytic clean-up of flue gases, and automatic operation are important subjects that need additional research.

BERA recommends that $500,000 be appropriated for this research.

Office of Technical and Financial Assistance

Regional programs.—The Regional Programs established by Congress in 1983 are administered through five separate regions located in the Southeast, Northwest, West, Great Lakes, and Northeast. These programs have been important in establishing individual state biomass programs, transferring research technology to the private sector, and stimulating the development and commercialization of the biomass energy industry through applied research, information and technology transfer, marketing, and other business assistance. These activities have created awareness and a positive image for biomass energy while providing significant environmental enhancement and creating jobs and income—especially in rural areas. In addition to decreasing dependence on foreign energy resources and the export of petrodollars, these activities have enhanced water and air quality through implementation of environmentally acceptable methods of waste disposal and generated jobs, income, and tax revenue. Projects are typically cost shared with program participants who add two to four times program funding. An example project is the development and installation of low-cost, anaerobic lagoons for disposal of livestock waste and generation of biogas for on-site fuel use. The five regional programs, which have similar objectives, should be sustained to help transfer research results to end users.

BERA urges that $10,000,000 be provided for the Regional Programs.

All conservation and renewable offices

Demonstration projects.—Considerable progress was made by DOE in fiscal 1993 to transfer research results to the private sector by the development of Cooperative Research and Development Agreements (CRADAs), but few projects to demonstrate new, advanced technologies were started. It is therefore strongly recommended that specific scale-up projects be initiated with industry involvement and cost sharing. The BERA Board of Directors recommends that the first of these demonstration projects be selected from these subjects: Methanol Production from Biomass Gasification Technology, Electric Power Production from High-Efficiency Biomass-Fueled Gas Turbines, Municipal Solid Waste Disposal-Energy Recovery by Best Available Technology, Pyrolytic Liquid Fuel Production by Best Available Technology, and Biomass Gasification-Molten Carbonate Fuel Cell Cogeneration Systems. DOE management should determine the priority and choose at least one demonstration project for start-up each year. This scale-up program should be in addition to the medium-Btu gasification demonstration and the fuel ethanol pilot plant projects that are now underway, the CRADAs between DOE and industry already in progress, and the biomass scale-up projects we recommend to begin development of large-scale energy plantations.

An appropriation of $11,000,000 for demonstration projects is recommended by BERA for the Office of Transportation Technologies and the Office of Utility Technologies. Although cost sharing by industry of at least 50 percent by industry is mandated for these types of projects, we recommend flexibility in this requirement to attract industrial participants as early as possible.

Program planning.—The BERA Board of Directors compliments DOE for updating its multiyear biofuels program plan in fiscal 1993. This is the first revision since fiscal 1989 and we hope it portends a regular schedule of program review and updating. The BERA Board recommends that this be done at least every two years.

STATEMENT OF THE AMERICAN PUBLIC POWER ASSOCIATION

The American Public Power Association (APPA), the national service organization representing more than 1,750 local, publicly owned electric utilities, submits this statement to the Senate Appropriations Subcommittee on Energy and Water Development concerning appropriations for Fiscal Year 1994.

POWER MARKETING ADMINISTRATIONS

Although the Clinton Administration's FY 94 budget calls for changes in the historic repayment practices of the federal power marketing administrations (PMAs) that would increase federal revenues by $100 million annually beginning in FY 96, the budget resolution contains no such directives.

Every dollar invested by the federal government in the federal power program is paid back -- with interest -- to the U.S. Treasury. PMA rates are set to recoup annual operation and maintenance expenses and to recover all capital and interest costs within 50 years. If repayment practices are altered to provide straight-line amortization of PMA debt -- as proposed in "A Vision of Change" -- power customers, in addition to facing major rate increases, would be penalized when low water years threaten their PMA's ability to meet its repayment obligations. Changes in repayment practices would be particularly inappropriate at this time for the following economic reasons:

- As the country continues to recover only slowly from the recession, the last thing consumers and the economy need is an artificial increase in the cost of federally generated electricity.
- President Clinton's proposed Btu tax would add about 2.67 mills to the cost of every kWh generated by hydropower, including that distributed by the PMAs. Added to rate increases dictated by PMA repayment changes, this would constitute a one-two punch for PMA customers.
- Dealing with environmental problems is increasing PMA rates in several areas. For example, BPA customers already face a double-digit increase due, in large part, to efforts to protect endangered species of salmon.
- Federal power in some areas is no longer the lowest-cost resource. Higher rates necessitated by straight-line amortization could endanger the competitive posture of federal power vis-a-vis other power sources.

APPA appreciates this Subcommittee's past commitment to oppose changes in the PMA repayment structure. We encourage you to continue to reject any changes in PMA repayment practices and to once more include in your FY 94 appropriations bill language that prohibits the PMAs from implementing market-based rates in place of cost-based rates.

BUREAU OF RECLAMATION

In late 1992, former Secretary of Interior Lujan signed a memo of understanding (MOU) with the state of California that anticipates eventual transfer of all federal facilities associated with the Central Valley Project (CVP) to the State of California. By taking this action, he was ignoring the spirit if not the letter of a directive included by this Subcommittee in the FY 86 Supplemental Appropriations Bill, that prohibited the expenditure of any federal funds to study the sale or transfer, in whole or in part, of any PMA or its functions. Fortunately, this MOU signed on behalf of the previous Administration is not binding upon the Clinton Administration. Secretary Babbitt has indicated his intent to proceed slowly with the CVP transfer issue.

Historically, APPA has been opposed to the transfer, sale, privatization or defederalization of any part of the federal power system. The very nature of multiple purpose water resource projects argues for continued federal ownership and operation of the CVP project. The federal government is in a unique position to balance the competing interests of power production; flood control; municipal, industrial and agricultural water supply; recreation; and fish and wildlife conservation.

Consequently, APPA urges the Subcommittee to include in the FY 94 appropriations bill language prohibiting either the Bureau of Reclamation or the Western Area Power Administration from expending any funds to study, plan or implement any transfer, sale, privatization or defederalization of the CVP until such action is specifically authorized by Congress.

CORPS OF ENGINEERS

APPA appreciates the Subcommittee's assistance last year in solving Southwestern Power Administration's problems with the Corps of Engineers in regards to a dam safety project at Beaver Lake, Arkansas. Through this intervention, the Southwestern Power Administration was able to save its customers $15.4 million in repair costs for which they were not financially responsible. APPA also thanks the Subcommittee for providing initial funding for powerplant upgrades at both Dardenell Lake, Arkansas, and Bonneville Dam, Washington, and urges the Subcommittee to continue funding for these ongoing projects in FY 94.

The Administration's budget request seeks $544 million over four years to reduce the backlog of operation and maintenance items at Corps projects, with $77 million proposed for this purpose in FY 94. APPA supports this effort and urges the Subcommittee to include powerplant upgrades and repairs among the projects funded for this purpose.

ELECTRIC AND MAGNETIC FIELDS RESEARCH

Electric and magnetic fields -- or EMF -- refers to the electric field caused by voltage and the magnetic field surrounding a current-carrying conductor. Concerns about possible adverse health effects from exposure to EMF have grown steadily since the early 1970s. While some studies have shown a possible link between childhood leukemia and EMF exposure, other studies have shown no association between adverse health effects and EMF. However, scientists, electric utilities and the public can agree on one point -- an expanded and accelerated research program, specifically focused on health effects, is needed to investigate and resolve the questions over EMF.

In FY 1993, DOE received $6 million for EMF research, $1.5 million less than was requested by the department. This was supplemented by modest funding for EMF research by other federal agencies. Electric utilities are also involved in independent research, primarily

Renewable Energy Joint Venture Project: Section 1202 of the Energy Policy Act authorizes DOE to create a cost-shared program for the commercialization of renewable energy technologies through joint ventures. Eligible projects range from direct combustion or gasification of biomass to photovoltaics, solar thermal, wind, geothermal and fuel cells.

Joint venture projects for emerging technologies, particularly with electric utilities, are imperative for the commercialization and, ultimately, widespread utilization of the nation's renewable energy resources. Even at the fully developed stage, these technologies require commercial demonstration before they are fully accepted by the marketplace. Under the joint venture program, the nation will move closer to a strategy to promote and use renewable resource technologies that are capable of delivering crucial electric energy capacity from inexhaustible resources at stable prices. We urge the Subcommittee to fund the joint venture program at the authorized level of $50 million in FY 94.

On-going Renewable Energy Programs In addition to urging funding for the above new initiatives under the Energy Policy Act of 1992, APPA strongly encourages continued support of the DOE research programs.

While basic R&D and laboratory-based work must continue, there needs to be an expansion in cost-shared solicitations in the form of joint ventures for emerging technologies and cost-shared joint ventures to demonstrate developed technologies that require validation in commercial settings. It is crucial that DOE programs become more market- and end-user focused if renewables are to ever achieve sizeable market penetrations. Two projects that APPA and other sectors of the electric utility industry started in 1992 in cooperation with the solar industry and DOE illustrate the potential of working closer with the market.

The first is the Utility Photovoltaic Group (UPVG). Started with seed money from DOE, the UPVG already includes 60 electric utilities and the three electric utility trade associations. Its main purpose is to accelerate the commercialization of solar photovoltaics (PV) for use by electric utilities. The UPVG has developed a detailed, multi-year plan for its electric utility members to work together with the PV industry and DOE to determine the best strategy for achieving commercialization of these technologies.

Another new electric utility group, formed by APPA, the Edison Electric Institute and interested electric utilities, is working toward a similar commercialization goal for utility use of solar hot water systems. The USH$_2$O group is working with both the solar hot water industry and DOE.

The premise of both "market pull" utility groups is that commercialization can best be accelerated when driven by buyer needs. The eventual purchasers and users of new technologies are in the best position to judge performance and cost requirements. Effective collaboration between buyers and suppliers, with DOE serving as a catalyst, is critical to ensure that the right products are developed for the right reasons. Funding for both utility-led commercialization groups should be maintained.

In the wind program, APPA is especially supportive of funding for three initiatives: (1) a wind resource assessment program coupled with a full-scale analysis of the transmission needs of the Great Plains resource, (2) the nationwide wind turbine evaluation program begun in 1992 by DOE and the Electric Power Research Institute, and (3) the Advanced Wind Turbine program, which supports the design of next generation machines. APPA also would like to see an even split between basic and applied research and development and commercialization in the FY94 wind program.

In the biomass area, the Biomass Power program should be increased to $25 million for FY 94, with particular attention paid to gasification R&D. Electric utilities are increasingly interested in coal gasification, while biomass gasification for power generation such as in fuel cells has great potential and deserves greater DOE attention. For the Biofuels program, the very promising herbaceous and short rotation woody biomass program should be accelerated, particularly with a test of using USDA farm reserve set-asides. It is highly unlikely that short rotation trees for power generation will ever be economic without the through the Electric Power Research Institute, which spent $15 million on EMF research in 1992.

In response to growing public concern over EMF questions, Congress included in the 1992 Energy Policy Act a new National EMF Research and Public Information Dissemination Program. This legislation authorized a five-year, $65-million effort (50 percent of which is to come from non-federal sources) to determine the health effects of EMF, to demonstrate EMF mitigation technologies, and to disseminate information to the public. DOE is charged with managing the overall program and conducting research in the areas of applied engineering and mitigation. DOE is also responsible for dissemination of information to the public in these two areas.

APPA supports FY 94 DOE funding of $6 million for on-going EMF programs, as well as an additional $12 million to initiate the National EMF Research and Public Information Dissemination Program. Of the $12 million in new DOE EMF funding, one-half would come from federal funds, while the other half would come from voluntary contributions by electric utilities and other interested parties.

RENEWABLES

As announced in its "Vision of Change for America" report, the Administration proposed to increase funding for renewable energy and energy conservation by $120 million over the FY 1993 level. This would bring funding for renewable research, development and commercialization programs up to $581 million for FY 1994, a budget APPA strongly supports.

The report also acknowledged new federal responsibilities provided by the Energy Policy Act of 1992 to: (1) promote new energy efficiency standards; (2) enhance research programs; and (3) authorize new demonstration/commercialization programs for renewable energy and energy conservation. However, the provisions in the Energy Policy Act are meaningless unless money is appropriated to implement them.

Highlights of specific FY 94 programs supported by APPA include:

Production Incentive Program: Section 1212 of the Act establishes a program whereby consumer-owned electric utilities may qualify for payments from DOE equal to 1.5 cents per kilowatt hour of electricity generated from new solar, wind, geothermal and biomass projects. Based on an overwhelming response to an APPA survey of member systems to determine the number of renewable energy projects that might be developed as a result of the new incentive payment program, APPA discovered that:

- Public power systems reported interest in developing at least 1,805 megawatts (MW) of renewable energy capacity from 1993 - 2003;
- Responses from 32 states show wide geographic interest in renewable energy projects; and
- Total production payments of $1.6 billion would be required during the 1993 - 2003 timeframe of the program to fund all planned or contemplated public power renewable energy projects.

The legislation authorizes production incentive payments to be made over twenty years. APPA urges the Subcommittee to appropriate $25 million for the Renewable Energy Production Incentive Program for FY 94. However, projects of this nature require a long lead time for planning and construction, and financial markets must have confidence in a long-term payment stream before they will underwrite such ventures. Congress should demonstrate its commitment to stable, long-term funding of this program, perhaps by appropriating a sum sufficient for multi-year funding for the program, carrying forward unobligated funds for use in subsequent fiscal year and by recognizing that viability of the program is dependent on consistency in stable funding over the life of the program.
use of farm reserve set-aside and similar agricultural programs. Use of such USDA programs could lead to an overall lowering of farm support payments, with a subsequent reduction in the budget deficit.

APPA's specific funding recommendations for FY94 are $61.4 million for geothermal, $25 million for biomass power, $28 million for biomass fuels, $80 million for wind R&D and market conditioning activities, $155.5 million for photovoltaics, $7.25 million for solar buildings, $59 million for solar thermal, and at a minimum, $3 million for hydropower.

FEDERAL ENERGY REGULATORY COMMISSION

The Energy Policy Act of 1992 significantly increased the caseload of the Federal Energy Regulatory Commission (FERC). Already more than 30 requests for "exempt wholesale generator" status established under the Act have been filed at the FERC, and many more requests are anticipated. Moreover, FERC's newly-granted authority to order transmission services under the Act is expected to be extensively tested in FY 94 and beyond.

FERC also faces an increased caseload in its traditional regulatory activities. FERC is charged with licensing and regulating hydropower dams on navigable rivers. This year more than 230 licenses, or 15 percent of the nation's nonfederal hydroelectric projects are up for renewal, the greatest number of renewals ever to be considered in a one-year period.

It is imperative that Congress fund FERC at a level sufficient to provide the necessary resources and personnel to implement the policies of the Energy Policy Act and act on the hydroelectric renewal applications in a timely and rational manner. Therefore, APPA recommends that FERC's budget be increased significantly to account for the expected increased caseload.

STATEMENT OF THE CONSORTIUM FOR PLANT BIOTECHNOLOGY RESEARCH

Mr. Chairman, members of the Subcommittee, thank you for the opportunity to testify. My name is Dorin Schumacher and I am President of the Consortium for Plant Biotechnology Research, formerly the Midwest Plant Biotechnology Consortium. The Consortium was organized in 1985 to carry out research and technology transfer that would enable companies to utilize agricultural products as new and improved sources of chemicals, pharmaceuticals, and energy. In 1993, it was incorporated as the Consortium for Plant Biotechnology Research, Inc.

The Consortium harnesses world class university plant biotechnology research capabilities with industrial applications to develop energy from biomass. The result will be improved-cost-effective renewable energy technologies for the nation. The Consortium now comprises 18 major research universities, 33 companies, trade associations representing another 150 companies, and several federal laboratories.

In Fiscal Year 1992, the Congress appropriated a total of $2.5 million to enable the Consortium to support research on renewable energy. The Fiscal 1993 Appropriations Act for DOE included an additional $2.5 million for the Consortium. With these federal funds, the Consortium has launched the "energy from biomass" research program, co-funding competitively selected 1992 research projects. The competition for 1993 projects is nearly completed. On behalf of the Consortium's 180 participating companies and 19 member universities and research institutes, I express our appreciation for your support. The Consortium has been invited by the Department of Energy to submit a management proposal for the use of the 1993 funds.

Plant biotechnology has the potential for improving the quality and the cost-effectiveness of renewable energy resources. The goal of the Consortium for Plant Biotechnology Research is to bring together industry, universities, and federal laboratories to conduct research in plant biotechnology that will: 1) improve the utilization of existing crops as energy sources; 2) reduce the cost of renewable energy production; and 3) develop an energy supply that is safer in its effect on the environment.

The results of the excellent research supported by the Department of Energy in previous years, when the need for renewable energy was felt strongly in this country, can be seen today in improved and more cost-effective production of bioenergy. For example, in 1980, the cost of ethanol produced from energy crops was calculated to be about $3.60 per gallon. In 1991, the cost had dropped to $1.25. Similar but less dramatic reductions were made in the production of ethanol from grains. Despite this progress, further research is necessary before clean, renewable fuels can fully contribute to the nation's energy needs. As energy shortages were ameliorated, much of the research was only partially completed. Seeing the need for renewable energy, the government is ramping up again to increase the commercial development of renewable energy technologies. If this occurs, research must also be ramped up to support this level of commercial development. If the United States is going to meet the nation's projected needs for bioenergy resources by the year 2000, the R&D must be done now to support that growth. If the legislation currently proposed becomes law, it is estimated that the needs for oxygenates would be 8 billion gallons per year. It is estimated that 2 billion gallons a year will be needed just to meet the Clean Air Act requirements. The technology is not currently available at this time to handle this projected growth. Research is needed to support refining and improving the technologies that will be needed for production at these levels. Given that the lag time between research and applications is five to ten years, the investment in that research must be made now so that when the public need and legislative initiatives require industrial action, the necessary technology will be ready to apply.

The United States is number one in the world in the quality of its university basic research. But, all too often, the results of this outstanding research do not get translated into solving society's problems. The Consortium for Plant Biotechnology Research is changing that by harnessing the research capabilities of world class universities to focus on solving energy from biomass problems with important industrial applications. Through the Consortium, the intellectual resources of our universities are being brought out of the ivory tower into the real world to solve applied problems. The work supported by the Consortium either would take much longer if done by industry alone, or would not be done at all. Industry simply does not have the research capabilities that America's great research universities have to bring to bear on these problems. University capabilities, however, as deep and accomplished as they are, have a tendency sometimes to pursue knowledge that is irrelevant to our pressing national needs. The strong corporate involvement in the Consortium helps to keep the projects we fund with this money in close touch with the search for practical solutions to our national energy problems.

The concept behind the Consortium has been enthusiastically supported by industry, universities, and federal laboratories alike. All parties involved see new technology as a key component in the success of American competition in a global marketplace. Federal funding of the Consortium insures that projects receive the critical mass of resources necessary to achieve timely, as well as meaningful results. This funding thus makes it possible to apply the research results of U.S. universities to the benefit of our economy, rather than having it developed overseas to the benefit of other countries competing in the world marketplace. We can probably all cite examples of technologies first discovered in the U.S. being first applied elsewhere.

A unique strength of the Consortium is the highly competitive process it uses to select research projects. The selection process combines rigorous peer review with built-in technology transfer through industrial member involvement. Proposed research projects are screened first by company members of the Consortium to assess their promise of significant contributions to meeting US. energy needs. Projects that survive industrial screening are peer reviewed for scientific merit through a process modeled after the competitive grant programs of the National Science Foundation, the National Institutes of Health, the Department of Energy, and the Department of Agriculture. The Consortium uses as peer reviewers distinguished academic scientists who serve on federal research agency review panels. Final project selection is made by the corporate members of the Secretariat, the Consortium's scientific advisory board, with input from at least two renowned academic scientists from non-member universities. Officials of the Department of Energy are involved in the process by: 1) helping to select preproposals to go forward for peer review, 2) reviewing preproposals and proposals for relevance to DOE programs, and 3) participating as observers in the final project selection. Their input has been very constructive and valuable.

The Consortium's thorough research project selection process insures that only the highest quality research with the most potential for industrial applications to meet U.S. energy needs is funded.

Fifteen research projects were selected through the Consortium's first "energy from biomass" competition held in 1992. The Consortium requires that federal funds be matched at least equally with non-federal funds. The total non-federal matching for the 1992 research projects came to a total of $1.4 million, or 114 per cent of the federal funds awarded, for a total of $2.6 million in research project funding. (Some federal funds were set aside for second year funding of the '92 projects.) Half of the matching came from industry. Companies investing in the Consortium 1992 research projects include Amoco Corporation, Biodyne Chemicals, Cargill, Inc., CIBA, Genencor International, Monsanto Company, New Energy Company of Indiana, Pioneer Hi-Bred International, Inc., and The Procter & Gamble Company. Other organizations investing in these projects include state governments, the Illinois Corn Marketing Board, the National Peanut Foundation, the Commission on Minnesota Resources, the Indiana Soybean Development Council, and the American Soybean Association.

Three of the fifteen projects address improved biomass production, and will attempt to genetically engineer resistance to insects and fungal pathogens. Four projects address improving the conversion of biomass into fuels/energy, including allowing fuller utilization of the biofuel at a lower cost and improving the conversion of "waste" products into energy. Two projects address the modification or production of novel or modified fuels to improve the efficiency of the conversion process and the product, including seeking to identify genes which could be important in lignin biosynthesis or disease resistance. Four projects are working on the production of compounds from biomass which currently require a high energy input for their production, or which are currently made from petroleum. One project is investigating a fungal pretreatment of wood to reduce production costs in the paper making industry.

The competition for 1993 projects is currently underway; project selection will be made in May.

The Consortium also is carrying out a project to identify university strengths and to match them with industrial and state needs for research on energy from biomass. In 1992, a competition for institutional projects designed to stimulate interdisciplinary research proposals at member research institutions was held. Grants were awarded to ten universities to: 1) identify and catalogue their energy from biomass research capabilities, 2) bring faculty with bioenergy expertise together for interdisciplinary research collaboration, 3) identify the research needs of bioenergy industry in their states, 4) identify the bioenergy research needs of other state organizations and agencies, 5) bring academic researchers together with companies to stimulate joint projects, 6) develop a computerized bibliographic database of the research literature on bioenergy for the use of both university and company researchers, and 7) produce a document that describes the energy from biomass research resources of these world class universities and the research needs of states and industry. Through this program, we will be able to match university strengths with industrial needs, and determine where there are any gaps that need filling.

The Consortium for Plant Biotechnology Research is the organizational mechanism that links players in plant biotechnology and coordinates their functions in order to bring about the efficient transfer of new knowledge and new technologies from the laboratory to the marketplace. The program has received high marks from both industry and the great research universities. This successful organizational structure, these member organizations, this motivation and talent are now being used to bring R&D resources to bear on improving biomass production, conversion, and utilization. At the administrative level, the Consortium has incorporated this year into a tax exempt, not for profit corporation, and changed its name from the Midwest Plant Biotechnology Consortium to the Consortium for Plant Biotechnology Research, Inc. We are the same program, however, with the same mission and same members.

We thank you for the support you have provided in the past, and request a 1994 appropriation of $5 million so that the research program can grow and so that the 1993 year projects can be continued and new projects started up. Speaking on behalf of my industrial colleagues, we believe that the Consortium's program is critical to helping develop and maintain the United States' energy supply.

Thank you very much for this opportunity to discuss with you this highly successful Consortium program.

AMBULATORY CARE RESEARCH AND TEACHING CENTER

STATEMENT OF IQBAL PAROO, PRESIDENT AND CHIEF EXECUTIVE OFFICER, HAHNEMANN UNIVERSITY

Mr. Chairman, and Members of the Subcommittee, thank you for the opportunity to submit testimony for the record. Hahnemann University has been developing a model energy efficient Ambulatory Care Research and Teaching Center (ACRTC). With the support of this Subcommittee last year, the planning and design for the Center will soon be completed and we will then be prepared to begin construction.

The ACRTC is part of a $285 million campus development program which is currently underway at Hahnemann. The entire program will generate 1,657 man years in construction jobs and create additional employment associated with the running of the new facilities. The ACRTC will cost over $60 million dollars. As you know, we originally requested $15 million in federal funding on a cost-shared basis to cover approximately one-fourth of this cost.

On behalf of Hahnemann University, I thank you for the support provided last year when $10 million was approved for our project in the fiscal year 1993 Energy and Water Appropriations Act. Today, I am requesting your support for the remaining $5 million to complete the project.

Hahnemann Ambulatory Care Research and Teaching Center

The Center, which will be adjacent to the current hospital facilities at Hahnemann in the heart of downtown Philadelphia, will be a seven story complex. This 375,000 square foot building will be serviced by a central utility plant to provide heating and chilled water sources from state-of-the-art energy efficient technologies supported by DOE which will be linked to other facilities on the Hahnemann campus.

The Center will house the newest diagnostic equipment including MRI and radiation therapy linear accelerators as well as an outpatient surgical suite. This facility will be a model for health care facility energy-efficiency, renewable energy and the latest in DOE and other health care technologies training and treatment. The unique nature of this Center's energy efficient system is its combination of the latest DOE technologies in one place. The ACRTC will therefore be a technology transfer demonstration for the Department of Energy.

Need for energy-efficient research and demonstration projects

While the United States has made important gains in the past decade to improve energy security, partly through increasing the efficiency of energy use, additional opportunities to reduce costs need to be pursued. The ability to build upon these successes is critical to both our nation's energy policy and economic future.

In addition, and of equal or greater concern, are the ongoing cost containment issues facing the health care industry. Energy costs typically represent 3 to 6 percent of total health care operating budgets. Therefore, the reduction of energy consumption by at least 20 percent will save the health care industry hundreds of millions of dollars while supporting our national goal to reduce dependence on imported energy commodities.

Most technologies and techniques to increase energy efficiency employed during the 1970s and 1980s were successful. However, there is still a need to increase research on renewable energy systems, which are expected to reach 12 percent of domestic energy production over the next two decades, to improve energy efficiency, and to decrease costs through new building equipment, systems, and construction technologies.

Research and demonstration projects can lay a foundation for an even larger role for renewables in the nation's longer term energy supply system. Additional applied research is necessary to demonstrate how best to integrate renewable energy technology (i.e. solar) with conventional heating and cooling systems, as well as how to evaluate the performance and reliability of various new building technologies when integrated in different types of facilities. Further research should also be conducted on how energy-efficient technologies and systems can reduce energy costs, and how building maintenance personnel can be trained to utilize these new technologies.

There is a need to support the development of training programs for energy awareness and increased skills for building service personnel who will comprise a large percentage of the workforce of the future. Human performance is the increasingly critical interface between the new technology and successful building energy management. The successful implementation of future energy-related programs will depend on highly skilled and trained Workforce 2000 building service and maintenance personnel.

Hahnemann's track record in energy-efficiency

This is not Hahnemann's first foray into energy-efficient health care systems. Since the early 1980s, Hahnemann has worked with the Department of Energy and has been recognized for its efforts to implement such innovative systems. Hahnemann developed the first contract in the health care industry to utilize a full service energy program. The program saved $4 million in energy savings during the first eight years, reduced energy consumption by over 20 percent, and set standards which are still models for the health care industry.

The Center will include such advanced energy technologies as (1) ice storage systems for chilled water productions, (2) passive and active solar—energy systems to capture heat and supplement conventional heating and cooling systems, (3) high reflectance lighting fixtures and systems for maximum illumination to the most cost effective levels and (4) motion sensing devices that will deactivate these systems when the facilities are unoccupied. Further efficiency will be achieved through the use of digital controls for precise response by systems and heat recovery apparatus on exhaust air streams to reduce energy waste.

Advanced energy-related health care technologies at Hahnemann

The ACRTC will enhance the energy-related medical technologies currently available at Hahnemann as clinical research and training tools. These technologies include the Hahnemann-pioneered Single Photon Emission Computerized Tomography (SPECT) for three-dimensional imaging, Cardiac Magnetic Resonance Imaging (MRI), Nuclear Cardiology, Neuroanatomical Imaging and Photochemotherapy. SPECT technology images organs and regions of the body and is used primarily to study diseases of the brain, bone, liver and heart and to detect tumors and infection. This technique also has applications for cancer, trauma, and organic diseases. Neuroanatomical Imaging employs video equipment which is linked to microscopes. These video images are fed to array processors to provide the clearest images. Hahnemann is one of the few institutions on the East Coast to offer Photochemotherapy which is effective against rare forms of skin cancer. This technology combines the use of light with chemotherapeutic drugs. The photopheresis machine at Hahnemann is one of only 50 in the world.

Finally, the installation of a total communications cable network, including fiber-optic transmission lines and a new digital switching system for processing voice and data, will link all of the buildings and Hahnemann, bringing medical information technology to both hospital bedsides and ambulatory care exam rooms.

All of these energy related technologies will be utilized in the new Ambulatory Center making the entire package—from facility energy-efficient systems to state-of-the art energy related medical technologies—a very unique model for the health care industry nationwide. Hahnemann is committed to sharing its successful demonstration of technology transfer with other medical institutions through evaluations, workshops and conferences sponsored by the U.S. Department of Energy. Hahnemann's contribution to this effort will amount to over 75 percent and will provide all program and operating costs associated with the ACRTC. We would greatly appreciate the Subcommittee's continued support of our efforts. Thank you.

STATEMENT OF THE AMERICAN ASSOCIATION OF ENGINEERING SOCIETIES

President Clinton's State of the Union address on February 17, 1993 singled out nuclear power research and development as an example of "programs that are no longer needed."

Nuclear energy generates almost 22 percent of the nation's electricity today, and will continue to play a significant role in the future. Advanced nuclear technologies which enhance safety, waste management and resource utilization should be a priority mission of the Department of Energy.

The American Association of Engineering Societies endorses continued nuclear power research and development to maintain both the nuclear energy option for future generations and U.S. international leadership in advanced reactor technology.

High-level radioactive waste research conducted over the past four decades has shown that deep geologic disposal can be safe and environmentally acceptable. The waste exists, and we have an obligation to present and future generations to dispose of it permanently. We must give high priority to establishing an underground repository for the waste in a timely manner.

Clear evidence of progress toward ultimate disposal of nuclear waste will be a major factor in strengthening the confidence of the public and state utility commissions in ensuring that nuclear energy can continue to help us maintain adequate supplies of energy while enhancing the quality of our environment.

MARY WASHINGTON POSITRON EMISSION TOMOGRAPHY PROJECT

STATEMENT OF THE MARY WASHINGTON HOSPITAL FOUNDATION

Mr. Chairman and distinguished members of the Senate Appropriations Subcommittee on Energy and Water Development, I am taking this opportunity to submit written testimony for the record with regard to Mary Washington Hospital and, more specifically, to the Hospital's efforts to establish a regional mobile Positron Emission Tomography (PET) demonstration unit that would be housed at Mary Washington Hospital in Fredericksburg, Virginia.

The purpose of this testimony is to request funding assistance for the construction and acquisition costs of a PET demonstration unit. Positron Emission Tomography is a nuclear imaging system. We are approaching this Subcommittee because it is our understanding that the Department of Energy has provided funding to nuclear medicine since 1946.

In its simplest form, PET is a nuclear-based diagnostic imaging technology that tells one how the body is working, actually capturing the images of cellular activities as opposed to conventional CT or MRI scanning, which shows tile physiology of a body form, bone and tissues as opposed to function.

What that means essentially is that PET has the ability to examine just how healthy tissue is within the body. As a consequence, PET can, for example, determine whether heart tissue in a patient being considered for by-pass surgery will be receptive to grafting before the patient undergoes very expensive by-pass surgery which could otherwise, in the end, fail. It can bring about tremendous cost savings by identifying those patients in which by-pass surgery would be unsuccessful. PET can detect metastatic cancers at a very early stage. It allows physicians to know instantly whether a tumor is growing or whether treatment is effective. There is little question but that PET will change the way in which oncologists practice medicine. It offers remarkable advances in the field of neuroscience where it can differentiate between active brain tumors and dead tissue killed in treatment. It can identify the focus of epilepsy in the brain, and can identify oncoming Alzheimer's as a condition distinct from normal senility expected in the aged.

In short, it is a remarkable new technology that used appropriately can play a considerable role in health care cost containment. It can do that by identifying very serious and expensive health care conditions early on when the changes of cure or containment are much, much greater than at a later date. It can predetermine, to a large extent, the chances of success with invasive surgery and more clearly define the nature of malfunctioning organs, eliminating in a great number of cases the necessity of investigative surgery.

These are the unique characteristics of PET. The uniqueness of seeing how things are functioning as opposed to how they look.

The problem with PET is, quite simply, its cost. For a hospital to consider adding PET, it is looking at a staggering cost of $5 million to $7 million for building and acquisition and about $1 million in annual operating expenses. At the same time, it is virtually impossible to turn our backs on the capability of this remarkable new technology. There are some 59 PET centers in operation in the United States. At least 45 of that group perform some clinical testing. There are none in the Commonwealth of Virginia. The PETs that were originally installed for research purposes, such as brain mapping, are now being devoted to patient examination use.

There will be an explosion of new health care costs if hospitals are not discouraged from individually installing PET centers in an effort to maintain their "high tech" imaging among their constituencies.

Mary Washington Hospital is proposing to mobilize a regional PET scanner which would be physically mounted on a truck enabling convenient transport to and from hospitals within a hospital share group on a mutually agreed upon schedule. This shared arrangement would eliminate technological duplication and address the need for cost containment in today's high cost environment.

Mary Washington also plans to seek to establish affiliations with other medical institutions in order to develop PET scan training programs for medical students and centralize a cyclotron for the production of radiopharmaceuticals used in the imaging. Our geographic location in Fredericksburg, Virginia, enables us to equally serve northern Virginia health care institutions along with major medical facilities in Charlottesville and Richmond, Virginia.

There is little question but that if the proliferation of PET scanners is left to market forces, then each of those geographic areas would soon have at least one scanner each and the number of scans required for the economic viability at each institution would result in a very aggressive referral program.

We have before us, for the first time, the opportunity to bring important new technology to the market in a way that makes economic sense. We must be able to demonstrate that expensive technology can be shared regionally and can be used responsibly.

Mary Washington Hospital is seeking $8 million to purchase and mobilize such a PET scanner unit with its related equipment. Mr. Chairman, I can assure you that this request for federal funding is not an initial attempt at funding; rather it is a last resort for funding after other avenues have been pursued. We feel strongly that PET technology represents a significant leap into modern medicine and that it can be demonstrated that such a technology can contribute to the solution of our health care cost problem rather than add to it.

I hope that you and the members of the Subcommittee agree with our assessment and support us in your upcoming fiscal year 1994 legislation.

Thank you for your consideration.

SUBCOMMITTEE RECESS

Senator JOHNSTON. The subcommittee will stand in recess until the call of the Chair.

[Whereupon, at 3:07 p.m., Wednesday, March 31, the subcommittee was recessed, to reconvene at 2 p.m., Thursday, April 29.]

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